

★ One of the Publications Owned and
Published by CHILTON COMPANY

Robert E. McKenna
Publisher

A. W. Greene
Editor

Associate Editor
William A. Barbour

Assistant Editor
Floyd H. Hopkins

Washington News Editors
George Baker
Karl Rannels, Ray M. Stroupe

West Coast Editor
R. Raymond Kay

Howard Kohlbrenner
Art Director

George Post
Production Manager

Consultants
Materials Handling: Matthew W. Potts
Transportation: John H. Frederick
Packing and Packaging: Allyn C. Beardsell
Legal: Leo T. Parker

Advertising Staff
Eastern States
H. S. Webster, Jr.
100 E. 42nd St., New York 17, N. Y.
Telephone: Murray Hill 5-8600

Central States
Hiram L. Roberts
859 Leader Bldg., Cleveland 14, Ohio
Telephone: Superior 1-1080

Middle West States
A. H. Ringwalt
30 N. Dearborn St., Chicago 2, Ill.
Telephone: FRanklin 2-0829

Western States
McDonald-Thompson
625 Market St., San Francisco 5, Cal.
Telephone: YUkon 6-0647

3727 W. 6th St., Los Angeles 5, Cal.
Telephone: DUmkirk 7-5391

Terminal Sales Bldg., Seattle 1, Wash.
Telephone: MAine 3860

115 S. W. 4th Ave., Portland 4, Ore.
Telephone: ATwater 7401

222 Colorado National Bank Bldg., Denver 2, Colo.
Telephone: MAin 2773

DISTRIBUTION DAGE

ESTABLISHED 1901

Chestnut and 56th Sts., Philadelphia 39, Pa.

VOL. 52, No. 1

JANUARY, 1953

In This Issue...

FEATURES

56% of Food Plants Operate Refrigerated Warehouses.....	19
Modern Handling Keeps Ship Line "Off Rocks".... Michael Gutwillig	20
What's New In Fork Truck Attachments..... W. J. Dernberger	24
Recent Improvements In Small Electric Hoists..... R. Ober	26
DA Holds Renegotiation Meetings In Four Cities.....	28
Debatable Tax Deductions And Their Legal Status.... Leo T. Parker	32
New Dodge B-4 Series Offers Automatic Transmission.....	34
Navy PM Program Cuts Handling Gear Maintenance.....	42
Fleet's Lubrication Experiment Doubles Diesel Engine Life Lloyd M. Fitzpatrick	44
Subsurface Pipe Line Premelts Snow and Ice.....	45
Merchandiser Handles More With New Oversize Elevator.....	49
Fork Truck Slashes Bale Handling Time 87%.....	51
Fork Truck Serves As Fleet Garage Jockey.....	53

DEPARTMENTS

On The Line—Editorial Comment.....	7
Letters to the Editor.....	8
Chuting the News—Coming Events.....	11
Men in the News.....	13
Washington DA..... Karl Rannels	15
DA Industry Survey.....	35
Free Literature.....	36
New Products.....	38
Industry Items.....	46
Within the Law..... Leo T. Parker	62

★ THE COVER



One-way traffic is just one of the modern handling improvements put in effect by Canada Steamship Lines and credited with helping keep the firm "off the financial rocks" (See Page 20). Tractor-trailer trains enter by the side port shown in the cover foreground, and leave by the side port visible in the background. Once on board, freight is handled by fork truck and elevator.

CCA



NBP

Acceptance under Section 34.64 P.L.&R. authorized.

Published monthly. Subscription rates: U. S. \$5 per year; Canada, \$5.50 per year; Foreign Countries, \$6 per year. Single Copies, 50¢ each, except February Directory Number—\$4 per copy.

Copyright, 1953, by CHILTON CO., (Inc.)

Officers and Directors

JOS. S. HILDRETH, President

Vice Presidents: EVERIT B. TERHUNE, P. M. FAHRENDORF, G. C. BUZBY, HARRY V. DUFFY
WILLIAM H. VALLAR, Treasurer JOHN BLAIR MOFFETT, Secretary
GEORGE T. HOOK, MAURICE E. COX, TOM C. CAMPBELL, FRANK P. TIGHE, LEONARD V. ROWLANDS
GEORGE MAISWINKLE, Asst. Treas. PAUL WOOTON, Washington Member of the Editorial Board
Executive, Editorial & Advertising Offices: Chestnut & 56th Sts., Philadelphia 39, Pa. GRanite 4-5600

JANUARY, 1953

ALONG THE WAY... OF **TWA**

TWA gives helicopter production a **LIFT**



NEWS REELS ARE HOT

THEY'VE GOT TO MOVE FAST... SO MANY MOVIE DISTRIBUTORS RUSH LATEST RELEASES VIA TWA AIR CARGO TO THEATRES THROUGHOUT U.S. WHEN SPEED'S A MUST...

PHONE TWA.

INDIA...

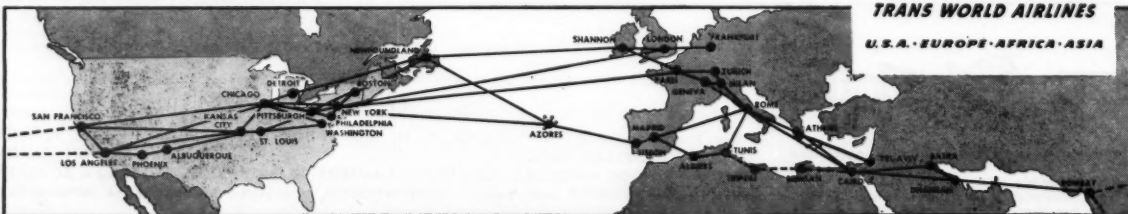
ONLY 2 NIGHTS AWAY BY TWA

TWA SPEEDS SHIPMENTS DIRECT TO OR FROM BOMBAY AND MID-EAST POINTS. YOU SAVE SHIPPING TIME... INSURANCE... PAPER WORK. REDUCE RISK OF PILFERAGE. ROUTE SHIPMENTS TWA. FREQUENT FLIGHTS.



All TWA Flights carry Air Mail, Air Express and Air Freight

TWA
TRANS WORLD AIRLINES
U.S.A. · EUROPE · AFRICA · ASIA



Renegotiation Blues

During the last few weeks, we've been busily engaged in what we have regarded as very important extra-curricular labors: Industry Conferences. The subject of our current conferences, stated simply, is "Renegotiation."

In our travels and discussions, we have uncovered four attitudes toward the subject. First, there are the worriers. They are working hard to protect their profits by compiling mountains of statistical and accounting data to justify their "costs and pluses."

Next are the optimistic fatalists. They know, from past experience, that they will have to return a portion of their profits to Uncle Sam. They just hope it won't be too much. These fellows are not compiling any more data than necessary, because the resulting information might be too revealing.

Then there are the rugged individualists who plan to handle the problem on a personal basis. "These government renegotiators are men, aren't they? Well, I know how to handle men. They've all got their price."

Finally, there are those who look surprised when the subject is raised, and ask, "What's the rush? There's a lot of time. We'll cross that bridge when we get to it."

None of those attitudes are correct, of course. The first group is going to a lot of trouble, but still accomplishing only half of the necessary job.

The second group, by their directly opposite approach to the problem, are leaving themselves wide open to too liberal interpretation by the Board. Each investigator will try to make as good a showing in "collections" as possible. This will cost those firms a lot of money.

The rugged individualists may find themselves in greater trouble than the mere repayment of excess profit entails.

As for the lads who are planning the "delayed action," their tactics are costly—if not disastrous. We came across several such cases. Here's a "frinstance" that's a shocker: After one of the Meetings, Mr. X came up to us moaning, "If only I had known . . . If only I had known . . ." The delayed action cost his firm one million bucks! (Uncle Sam was nice about it though. He let these boys split it up into four installments over four years.)

This reminds us of the recent election campaign, when you and we were told, "Brother, you never had it so good!" If you're not careful, the Renegotiation boys may repeat it as they put you through the wringer.

Yakkety Yak

And now for a more cheerful note. Eisenhower's appointee as Secretary of Commerce says:

"I am optimistic enough to believe that the present level of business activity can be sustained.

"As our population increases, and our advances in new products and technological developments are continued, we can carry on our business cycle without those great falls and rises in the level of economy."

... That's a pretty courageous statement to make in the face of predictions by business economists that business is due to taper off toward the end of this year, and during 1954.

... On the other hand, business executives we've talked to during the last few weeks, exude confidence in the new administration. And that means a lot.

... Take GMC, for example. Its Frigidaire Division recently added about 3,500 workers in its two Dayton plants. That's an average of about 50 a day. Their total now is around 20,000. Only 3,500 short of its peak in July, 1948.

... The feeling is so contagious that even the railroads are going to lay out another \$1,300 million this year for modernization. Happy Days Are Here Again!



Editor

Here's Why Leading Companies Prefer **MAGCOA** *light-weight* **HEAVY-DUTY** **DOCKBOARDS**

Here are six good reasons why many of America's leading companies have standardized on MAGCOA Light-weight Magnesium DOCKBOARDS for use in *all* plants—six important advantages that only MAGCOA can offer you.

1. Quarter-round safety curbs deflect wheels, prevent run-offs, prolong tire-life; are low for equipment clearance
2. Rounded curb ends for safer, easier, tire-saving turns
3. Rugged, bridge-built safety spans—individually engineered for extra strength and elimination of dangerous slipping
4. One-piece, weather-sealed hand-holds, molded to fit the hand—for complete safety in lifting and positioning
5. Special rounded edge beveling eliminates jars without sacrificing strength—saves tires, equipment and loads
6. Individually engineered crown keeps edges flush with floors

Light-weight HEAVY-DUTY Magnesium Construction
Lightness, coupled with ruggedness, is another Magcoa Dockboard feature that assures you of quicker, safer, easier handling . . . as it has for others. Use the handy coupon to get helpful literature illustrating exclusive Magcoa Dockboard features and other Magcoa materials handling equipment. At the same time, ask for new literature showing how Magcoa's magnesium fabricating experience and facilities can help you improve your products through use of light-weight, heavy-duty magnesium.

MAGNESIUM COMPANY OF AMERICA
EAST CHICAGO, INDIANA — Representatives in Principal Cities



DIVISION OFFICES:

NEW YORK 20,
30 Rockefeller Plaza
PHILADELPHIA 18,
8001 Southampton Ave.
WASHINGTON 5, D.C.,
Walker Bldg.
HOUSTON 17,
7657 Moline St.
LOS ANGELES 34,
8922 W. 25th St.
SAN FRANCISCO 4,
Russ Bldg.

MAGNESIUM COMPANY OF AMERICA, East Chicago 3, Ind.

Please send ☐ Dockboard Bulletin ☐ Fabrication Folder

Name _____ Title _____

Company _____

Address _____

City _____ Zone _____ State _____

Circle No. 106 on Card, Page 35, for more information

LETTERS TO THE EDITOR

Accident Test Cases

To the Editor:

I recently read an article, "Judging Accident Responsibility," in your October issue. I feel that it would be very beneficial and informative if we could conduct an examination similar to the one you describe, at this unit.

Col. E. D. Elwood
Commandant

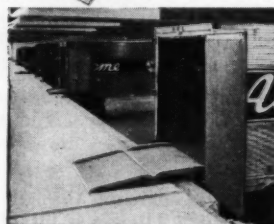
No. 25 Central Ordnance Depot,
RCOC
Montreal, Que.

To the Editor:

We read with interest, the article "Judging Accident Responsibility" which appeared in the October, 1952, issue of DISTRIBUTION AGE. Many of the ideas expressed by the author, Mr. Donald S. Buck, should aid in stimulating driver interest in safe driving practices.

E. J. Berney

Bedford Garage Service
San Francisco, Cal.



For use on truck docks



. . . at railroad sidings or wherever material is moved

Complete sets of test cases are on the way to the above gentlemen, and to the many others who have requested them. Inquiries for Mr. Buck's tests continue to pour in.—Ed.

Bad Compass

To the Editor:

In your November, 1952, issue of DISTRIBUTION AGE on Page 64 under "Industry Items" you report the following:

Northwestern Transfer Co., purchased Atlas Transfer and Storage Co., New York, N. Y.

I am quite sure your fine publication has reference to our recent (Sept. 30, 1952) purchase of the Atlas Transfer & Storage Co. of Portland, Oregon.

While we are still expanding in our 71st year of serving America in Northwestern United States, we haven't pushed the geographical Northwestern part of U. S. A. to the Hudson River.

Melvin P. Phil
Manager

Northwestern Transfer Co.
Portland, Oregon

Our apologies for this poor attempt to relocate the Great Northwest. Please consider the record "straight."
—Ed.

Chuting the NEWS

Truck-Trailer Manufacturing Group Announces Program for Convention

William E. Grace, president, Truck-Trailer Manufacturers Assn., has announced that a tentative program has been prepared for the Association's Twelfth Annual Convention, which will be held Jan. 26-28 in the Edgewater Gulf Hotel, Edgewater Park, Miss.

Key speakers will include Walter F. Carey, president of American Trucking Associations; Professor Marvin J. Barloon, Western Reserve University, Cleveland, Ohio; R. C. Sollenberger, Conveyor Equipment Manufacturers Association, and Dr. Kenneth McFarland, ATA Educational Director.

The convention opens Monday, January 26, with registration, the annual TTMA championship golf contest, and an evening gathering in which associate members will play host to TTMA members and guests at a reception and buffet dinner followed by dancing and entertainment.

—DA—

Robert L. Hiner is new chairman of the Movers' Conference of America Committee on Claims Prevention.

Harry C. Davis Elected President By Conveyor Manufacturers Assn.

Harry C. Davis, GM, Kanawha Mfg. Co., Charleston, W. Va., has been elected president of the Conveyor Equipment Manufacturers Assn., according to G.

Walter Ostrand, Chicago, Ill., retiring president. R. C. Sollenberger, for many years the staff head of the organization, was re-elected executive vice president.

Other new officers are: R. F. Tomlinson, Oliver Corporation, A. B. Farquhar Div., York, Pa., vice president; Jervis C. Webb, Jervis B. Webb Co., Detroit, Mich., treasurer, and Fred S. Wells, Stephens-Adamson Mfg. Co., Aurora, Ill., secretary.

Elected as directors are: J. A. Jeffrey, Jeffrey Mfg. Co., Columbus, Ohio; Lee Sekulski, Mathews Conveyor Co., Ellwood City, Pa., and R. B. Maas, Screw Conveyor Corp., Hammond, Ind.

—DA—

Harry J. Carroll, director of traffic for Goodyear, has been elected a vice president of the National Defense Transport Association.

(Please Turn Page)



An International model LFD-320 super-duty truck carries an estimated single load to build three average-sized homes—115 tons. Driver of the truck is Don Ford, Ukiah, Cal., trucker, whose truck fleet hauls an average of 3 million board feet a month

—DA—

Walter E. Schirmer, Clark Equipment Co., was re-elected president of the Industrial Truck Association at the recent annual meeting.

Coming Events

- Jan. 12-15—American Management Association, General Management Conference, Hotel Statler, Los Angeles, Cal.
- Jan. 13-16—Highway Research Board, 32nd Annual Meeting, Washington, D. C.
- Jan. 14-15—Atlantic States Shippers Advisory Board, 29th Annual Meeting, Lord Baltimore Hotel, Baltimore, Md.
- Jan. 22-23—National Council of Private Motor Truck Owners, Inc., 14th Annual Convention, Hotel Statler, Detroit, Mich.
- Jan. 26-30—United Fresh Fruit and Vegetable Association 49th Annual Convention, Los Angeles, Cal.
- Feb. 18-20—The Society of the Plastics Industry, Inc., Eighth Annual Reinforced

- Plastic Division Conference, Shoreham Hotel, Washington, D. C.
- Feb. 25-28—National Vehicle Show and Fleet Maintenance Exposition, Columbus Ave., Armory, New York, N. Y.
- Mar. 1-4—National Frozen Foods Convention, Conrad Hilton Hotel, Chicago, Ill.
- Mar. 10-11—The Society of the Plastics Industry Canada, Inc., General Brock Hotel, Niagara Falls, Canada.
- Apr. 8-10—The Society of the Plastics Industry, Inc., Pacific Coast Section Conference, Last Frontier Hotel, Las Vegas, Nev.
- Apr. 20-23—American Management Association, Packaging Conference and Exposition, Navy Pier, Chicago, Ill.

- Apr. 27-May 8—British Industries Fair, Earls Court and Olympia, London, Castle Bromwich, Birmingham, England.
- May 9-15—The Society of the Plastics Industry, Inc., Annual Meeting and Conference, Cruise to Bermuda.
- May 18-23—Materials Handling Exposition, Convention Hall, Philadelphia, Pa.
- May 21-27—American Warehousemen's Association, 62nd Annual Meeting, Washington, D. C.
- June 15-19—Exposition of Basic Materials for Industry, New York, N. Y.
- Oct. 18-20—Society of Industrial Packaging and Materials Handling Engineers Exposition, Boston, Mass.

Chuting the NEWS

(Continued from Page 11)

Material Handling Institute Names Palmer 1953 President, Discusses May Exposition Plans

At the annual meeting of the Materials Handling Institute in the Hotel Statler, New York, N. Y., Dec. 18, the following officers were elected for 1953: President, H. M. Palmer, general sales manager, Lewis-Shepard Products, Inc.; 1st Vice President, C. B. Elledge, manager of sales, Materials Handling Industries, General Electric Co.; and 2nd Vice President, Walter E. Schirmer, vice president, Industrial

Truck Division, Clark Equipment Co.

The Fifth National Materials Handling Exposition, in Philadelphia, May 18-22, will be 50 per cent larger than the preceding exposition in Chicago, it was announced. Approximately 162,000 sq ft has been rented by exhibitors to date. An estimated attendance of 30,000 people is expected to see the latest advancement in materials handling equipment.

—DA—

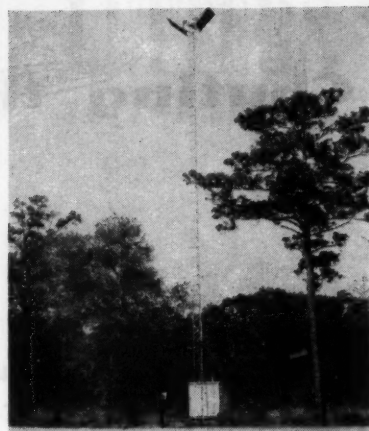
Illinois-Iowa Group Meets in Chicago

An estimated 300 members and guests attended the Illinois-Iowa Warehousemen's Meeting in Chicago Nov. 14-15. The meeting concluded with a banquet in honor of Jerome D. Ullman, with Gene Flack as the principal speaker. Other highlights of the two-day session included panel discussions, talks and demonstrations on important warehouse topics.

Handling Shipments

Main & Co., independent CPA firm, has announced through MHI that the total shipment figures for September, 1952, were \$37,713,473. This amount represents the figures of: Conveyor Equipment Manufacturers Assn., Industrial Truck Assn., Caster and Floor Truck Manufacturers Assn., and Assn. of Lift Truck and Portable Elevator Manufacturers. The release is a monthly service conducted by MHI.

—DA—



The Gulf, Colorado and Santa Fe Railway Co., an operating carrier of the Atchison, Topeka and Santa Fe system, has completed installation of a Philco multichannel microwave communications relay system between Galveston and Beaumont, Texas. The repeater station at Morey, Texas, is shown here with its guyed steel tower, passive reflectors and prefabricated concrete equipment shelter.

MH Systems Pay Dividends In Costs and Production

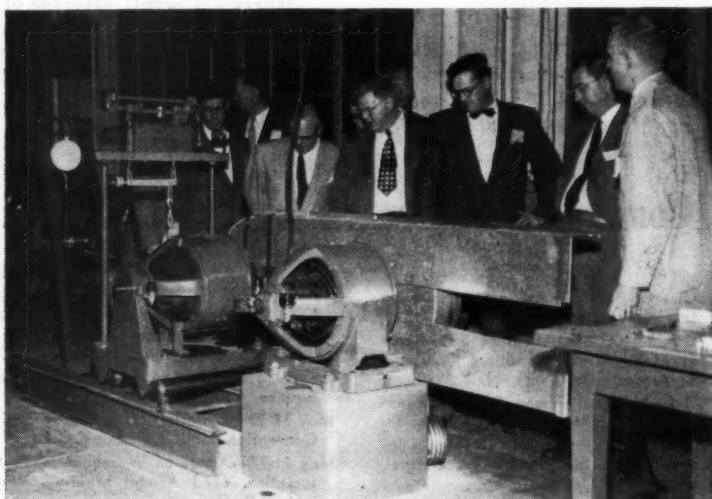
Integrated materials handling systems, making use of the most up-to-date thinking on both manual and mechanical means of handling goods will definitely pay dividends in safety as well as in increased production and lower costs, according to Jervis B. Webb, Detroit, speaking at the recent Annual Meeting of ASME.

"Conveyors, automation devices, cranes, industrial trucks—all are available to become part and parcel of the building plan of industry. Whether the industry be the mining of iron ore, making an automobile, warehousing soap or printing a newspaper, all are tied up in a major degree with the problems of handling," he said.

—DA—

Forwarders Name Members

Four new members have been approved by the executive committee of the Customs Brokers and Forwarders Association of America, Inc. They are: John S. Connor, Baltimore, Md.; Dupuy Storage and Forwarding Corp., New Orleans, La.; J. P. Fleisig Co., New York, N. Y., and R. W. Smith and Co., Houston, Texas.



Official of Graton & Knight Co., manufacturers of industrial leather products, shows a representative group of MH Engineers the G&K Engineering Laboratory dynamometer for testing both flat and V transmission belting. The company was host to New England chapter of AMHS.



Yale fork lift truck helps fight \$50,000 crude rubber fire at General Tire and Rubber Co., Akron, Ohio. Firemen drenched outside bales with water, which were removed by the truck, so hoses could extinguish burning inside bales. This method saved almost 2/3 of 315,000 lb storage

Packaging Institute Re-elects All Officers— Names Three New Men to Board of Directors

Three men were added to the Board of Directors and all officers were re-elected at the Annual Fall Packaging Institute Forum.

Board of Directors: Dr. John C. Bird, coordinator of new products development, Lederle Laboratories Div., American Cyanamid Co.; Frank Greenwall, president, National Starch Products, Inc.; Sam E. Noble, vice-president in charge of production, Chattanooga Medicine Co.

Board members re-elected to serve a second 3-year term were: J. D. Malcolmson, Robert Gair Co., Inc.; R. C. Reed, The Texas Co.; John A. Warren, American Home Products Corp.

Officers re-elected include: Robert DeS. Couch, General Foods Corp., president; R. Chester Reed, The Texas Co., vice president; F. S. Leinbach, Riegel Paper Corp., vice president; Dr. L. V. Burton, executive director.

AAR Re-elects Faricy

William T. Faricy, Washington, D. C., was re-elected president of the Association of American Railroads at the recent Annual Meeting. Mr. Faricy has held the post for the past five years.

Union Pacific Railroad plans to spend more than \$4 million to expand its yard facilities in Kansas City, Kan.

United Van Convention

A record number of United Van Lines agents, more than 250 from all parts of the U. S. and Canada, gathered in St. Louis, Mo., in mid-November for the sixth annual convention of the nationwide long distance household goods carrier organization.

MEN

IN THE NEWS

Materials Handling

William T. Stephens — appointed staff engineer, Parker Alliance Company, Cleveland, Ohio.

Donald G. Mitchell—named manager of new Detroit Branch Office, Hapman Conveyors, Inc., Detroit, Mich.



Robert E. Clemens has been named national sales manager for Century Products Co., Minneapolis, Minn. He will direct all national and export sales, promotion and organization.

T. G. Greene—appointed salesman of the Atlanta, Ga., office of Unistrut Products Company, Chicago, Ill. Unistrut also appointed to their branch offices Keith H. Long, San Francisco, Cal.; Albert E. Serewicz, Chicago, Sherman White, New York, N. Y., and George T. McKay, Cleveland, Ohio.

Harold Daschner—new sales manager, Lansing Co., Lansing, Mich.

Donald E. Ehlenfeldt—named advertising manager of Round Chain Co.

James F. Bishop is general manager of American Hoist and Derrick Co., St. Paul, Minn. A veteran of 30 years service with American Hoist, he continues also as secretary-treasurer.



Harry L. Reynolds—new treasurer of The Thew Shovel Co., Lorain, Ohio. Thew also appointed Waid V. Clark secretary of the company.



Eugene A. Gump is new general manager of the Lansing Co., Lansing, Mich. He was former director of purchases for the State of Michigan.

Supreme Court Stays Recent CAB Ruling

Chief Supreme Court Justice Fred M. Vinson has acted to keep temporarily in effect a recent lower court order staying enforcement of a CAB regulation designed to prohibit scheduled operations by a non-scheduled, non-certificated airline.

Justice Vinson provided for continuance of a "stay" order issued by the U. S. Court of Appeals for the District of Columbia Circuit when Air Transport Associates, Inc., of Seattle, Wash., filed a certiorari petition in the Supreme Court, seeking review of the judgment of the appeals court in a case in which Air Transport Associates and a number of other non-scheduled airlines attacked a CAB regulation

(Please Turn to Page 68)

(Please Turn to Page 74)

ANNOUNCING

A new Dodge truck parade of power!



NEW! More powerful engines!

A parade of power! See the new Dodge "Job-Rated" trucks at your Dodge dealer's today. A total of 7 big, rarin'-to-go engines, including 3 brand-new power plants with high compression ratios and higher horsepower, greater cooling capacity, increased displacement, twin carburetion available on larger models. Plus famous features like 4-ring pistons with chrome-plated top ring, exhaust valve seat inserts.

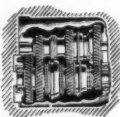
In addition, the new Dodge trucks offer outstanding new brakes, new no-shift transmission, and over 50 other new features. See your Dodge dealer for the biggest truck buy on record!

For a truck, ½-ton through 4-ton
that fits the job, see the NEW...



NEW! Extra-powerful brakes!

Stop easily on steep grades, fully loaded. Super-safe brakes give silky-smooth braking, reduced driver fatigue, greater load protection... new increased stopping ability on 1- through 2½-ton trucks! **PLUS** Dodge's oversize braking surface with Cyclebond linings.



NEW! Truck-o-matic transmission!

New Truck-o-matic transmission... available on ½- and ¾-ton models of Dodge "Job-Rated" trucks... saves shifting, cuts driver fatigue, lets you rock out of snow, mud, sand. Only Dodge offers shift-free Truck-o-matic! **PLUS** famous gyrol Fluid Drive, to lengthen truck life, protect your load.



NEW! Over 50 features!

50 ways new! Reinforced cab construction, improved exhaust system, extra-capacity radiators. Tinted glass, heaters with stepped-up heat output available. **PLUS** moistureproof ignition, high-torque capacity starting motors, and other dependability features. See your Dodge dealer.

DODGE "Job-Rated" TRUCKS

Now on display at
Your Dodge Dealers!



Washington

DA

By Karl Rannells, *Chilton Washington News Bureau*

Production Prospects

Materials supply picture for manufacturers of materials handling, packaging, and other distribution machinery and equipment con-

tinued to brighten with the new year. Most shortages of controlled materials seemed to be on the way out, although controversy continues over when controls should be lifted. Business and industry continue to bring pressure for tossing out most production controls by April 1. But the government has just as strongly opposed any speed-up in decontrol.

Crux of the matter is that the outgoing administration had the job of composing the State of the Union message and making up the Budget proposals for next year. Those who should know tell DISTRIBUTION AGE that the old group was making a strong pitch for control authority to be continued after July 1, present expiration date, with funds asked to maintain a controls staff on "a standby basis." The incoming Congress and administration may have other ideas.

There seems to be no argument about plentiful supplies of steel before the end of the first half 1953. But officials won't predict the future of either copper or aluminum. Copper imports were heavy during late 1952 but there is no assurance this rate will continue. Aluminum will be in good supply, once the power problem is solved. Power shortages have kept aluminum output down. Year-end problem was to keep first quarter production up to fourth quarter levels. In any event, efforts will be made to get materials handling producers good treatment.

Agricultural Production

Figured on a long range basis, there will be a sustained and rising demand for production, processing, packaging, handling, and

other distribution machinery for agricultural products. This takes in everything from potato diggers to motor trucks, from grain combines to freight cars, from grading equipment to forklifts.

Tip-off is a routine census report, stating that the population is increasing some 2,500,000 a year, which the Agriculture Dept. picked up and figured out that national population will have increased 25 per cent between 1950 and 1975. Agriculture says this means "Five persons at the table in 1975 where there are now four."

This means, according to agriculture economists, that even allowing for no increase in present standards of living that it calls for 5½ billion lb more red meat, 2½ billion gal more milk, 1½ billion doz more eggs, 1 million bushels more corn, and so on down the list. This percentage would not apply across the board for all products, of course. But it does spell additional work load for the distribution industries.

Consumer's Dollar

Some segments of the distribution industry may expect to answer questions about costs and other matters when the FTC gets going

good in its search for what happens to the consumer dollar. The extent to which business and industry will be subjected to this new investigational headache will depend upon how quickly the new administration moves in to change the trend in economic and political thinking.

It has been decided unofficially by a majority of the present commission to go ahead, as requested by outgoing President Truman, to probe into all phases of production, distribution, and consumption to find out where the consumer dollar goes.

Public hearings on this broad subject are expected to get going in January, with the steel industry and some durables manufactures under the microscope. Staff members have been busy assembling data to be used in these hearings. They will aim at finding out how much of the sales dollar goes into production and distribution, but also how much is spent for materials, labor, profit, etc.

Amphibian Unveiled

The Army is now proudly displaying its latest achievement in the way of amphibious handling of heavy cargo. This is the large,

economy sized version of the duck (or DUKW) which it used in the last war. While there is nothing new in the basic principle, the huge vehicle is remarkable for both its size and ability to transport extremely heavy equipment, such as a medium tank, from ship to shore.

Known as the BARC, the vehicle has an overall length of 61 ft, a width of 27¼ ft, a height of 16 ft, and it runs on 10-foot tires (36.00 by 41.00). Each of the four wheels is separately powered by a 165 hp industrial diesel, with three speeds forward and one reverse, developing a speed of 15 mph on land. On water, it is driven by two screw propellers which receive their power from two of the four engines.

Building Prospect

Those who have had to put off building because they couldn't get government permission or because of materials scarcities should have

an easier time of it soon. In fact, the government expects the working off of this backlog to send the 1953 dollar volume of construction work up to a new high. Economists say it may go to a new high of \$32.5 billion.

Here is the way it looks to the experts now. Heavy factory and other industrial building will be down, (Please Turn to Page 58)

uper-
duced
new
2-ton
surface

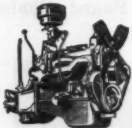
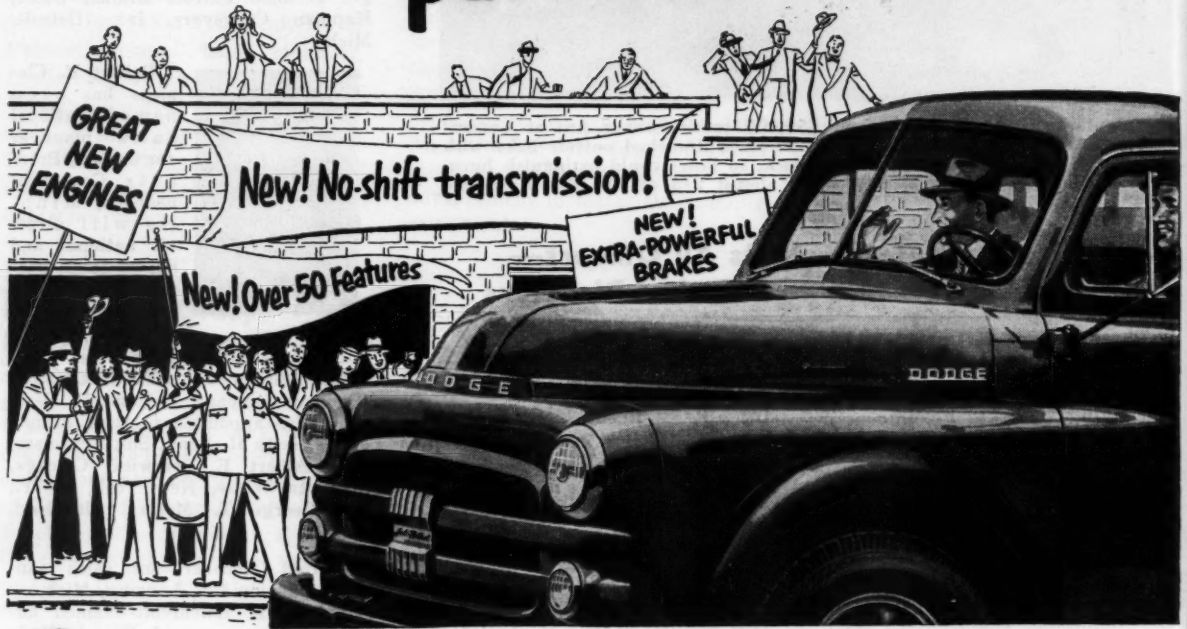
le on
ated",
e, lets
odge
mous
protect

, im-
ators.
output
high-
er de-
.

at
ers!

ANNOUNCING

A new Dodge truck parade of power!



NEW! More powerful engines!

A parade of power! See the new Dodge "Job-Rated" trucks at your Dodge dealer's today. A total of 7 big, rarin'-to-go engines, including 3 brand-new power plants with high compression ratios and higher horsepower, greater cooling capacity, increased displacement, twin carburetion available on larger models. Plus famous features like 4-ring pistons with chrome-plated top ring, exhaust valve seat inserts.

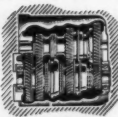
In addition, the new Dodge trucks offer outstanding new brakes, new no-shift transmission, and over 50 other new features. See your Dodge dealer for the biggest truck buy on record!

For a truck, ½-ton through 4-ton
that fits the job, see the NEW...



NEW! Extra-powerful brakes!

Stop easily on steep grades, fully loaded. Super-safe brakes give silky-smooth braking, reduced driver fatigue, greater load protection . . . new increased stopping ability on 1- through 2½-ton trucks! **PLUS** Dodge's oversize braking surface with Cyclebond linings.



NEW! Truck-o-matic transmission!

New Truck-o-matic transmission . . . available on ½- and ¾-ton models of Dodge "Job-Rated" trucks . . . saves shifting, cuts driver fatigue, lets you rock out of snow, mud, sand. Only Dodge offers shift-free Truck-o-matic! **PLUS** famous gyrol Fluid Drive, to lengthen truck life, protect your load.



NEW! Over 50 features!

50 ways new! Reinforced cab construction, improved exhaust system, extra-capacity radiators. Tinted glass, heaters with stepped-up heat output available. **PLUS** moistureproof ignition, high-torque capacity starting motors, and other dependability features. See your Dodge dealer.

DODGE "Job-Rated" TRUCKS

Now on display at
Your Dodge Dealers!



Washington **DA**

By Karl Rannells, *Chilton Washington News Bureau*

Production Prospects

Materials supply picture for manufacturers of materials handling, packaging, and other distribution machinery and equipment continued to brighten with the new year. Most shortages of controlled materials seemed to be on the way out, although controversy continues over when controls should be lifted. Business and industry continue to bring pressure for tossing out most production controls by April 1. But the government has just as strongly opposed any speed-up in decontrol.

Crux of the matter is that the outgoing administration had the job of composing the State of the Union message and making up the Budget proposals for next year. Those who should know tell DISTRIBUTION AGE that the old group was making a strong pitch for control authority to be continued after July 1, present expiration date, with funds asked to maintain a controls staff on "a standby basis." The incoming Congress and administration may have other ideas.

There seems to be no argument about plentiful supplies of steel before the end of the first half 1953. But officials won't predict the future of either copper or aluminum. Copper imports were heavy during late 1952 but there is no assurance this rate will continue. Aluminum will be in good supply, once the power problem is solved. Power shortages have kept aluminum output down. Year-end problem was to keep first quarter production up to fourth quarter levels. In any event, efforts will be made to get materials handling producers good treatment.

Agricultural Production

Figured on a long range basis, there will be a sustained and rising demand for production, processing, packaging, handling, and other distribution machinery for agricultural products. This takes in everything from potato diggers to motor trucks, from grain combines to freight cars, from grading equipment to forklifts.

Tip-off is a routine census report, stating that the population is increasing some 2,500,000 a year, which the Agriculture Dept. picked up and figured out that national population will have increased 25 per cent between 1950 and 1975. Agriculture says this means "Five persons at the table in 1975 where there are now four."

This means, according to agriculture economists, that even allowing for no increase in present standards of living that it calls for 5½ billion lb more red meat, 2½ billion gal more milk, 1½ billion doz more eggs, 1 million bushels more corn, and so on down the list. This percentage would not apply across the board for all products, of course. But it does spell additional work load for the distribution industries.

Consumer's Dollar

Some segments of the distribution industry may expect to answer questions about costs and other matters when the FTC gets going good in its search for what happens to the consumer dollar. The extent to which business and industry will be subjected to this new investigational headache will depend upon how quickly the new administration moves in to change the trend in economic and political thinking.

It has been decided unofficially by a majority of the present commission to go ahead, as requested by outgoing President Truman, to probe into all phases of production, distribution, and consumption to find out where the consumer dollar goes.

Public hearings on this broad subject are expected to get going in January, with the steel industry and some durables manufactures under the microscope. Staff members have been busy assembling data to be used in these hearings. They will aim at finding out how much of the sales dollar goes into production and distribution, but also how much is spent for materials, labor, profit, etc.

Amphibian Unveiled

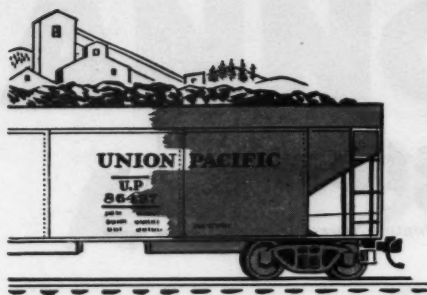
The Army is now proudly displaying its latest achievement in the way of amphibious handling of heavy cargo. This is the large, economy sized version of the duck (or DUKW) which it used in the last war. While there is nothing new in the basic principle, the huge vehicle is remarkable for both its size and ability to transport extremely heavy equipment, such as a medium tank, from ship to shore.

Known as the BARC, the vehicle has an overall length of 61 ft, a width of 27¼ ft, a height of 16 ft, and it runs on 10-foot tires (36.00 by 41.00). Each of the four wheels is separately powered by a 165 hp industrial diesel, with three speeds forward and one reverse, developing a speed of 15 mph on land. On water, it is driven by two screw propellers which receive their power from two of the four engines.

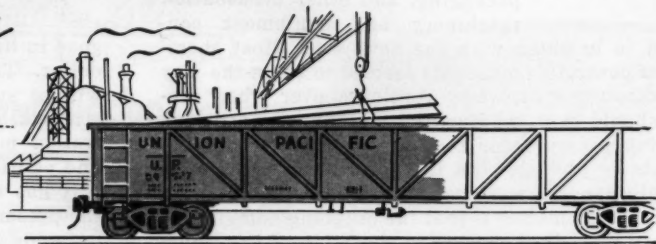
Building Prospect

Those who have had to put off building because they couldn't get government permission or because of materials scarcities should have an easier time of it soon. In fact, the government expects the working off of this backlog to send the 1953 dollar volume of construction work up to a new high. Economists say it may go to a new high of \$32.5 billion.

Here is the way it looks to the experts now. Heavy factory and other industrial building will be down, (Please Turn to Page 58)



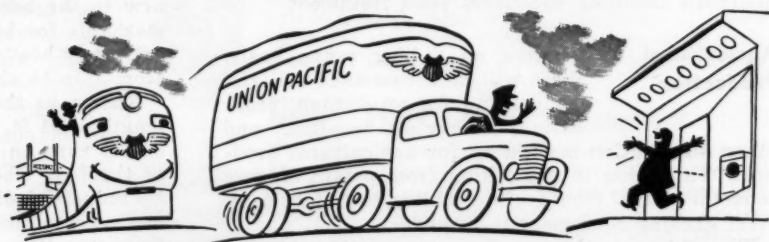
To keep the little woman gay,



To lighten up her chores,



U. P. gives service all the way



From mines to dealers' doors.

The magic of American industry converts the earth's treasures into time-and-work-saving devices that lighten household tasks and make possible more hours of leisure and enjoyment.

The magic of American railroading transports the raw materials to industrial plants... also provides a safe, dependable means of shipping the finished products to distributors and dealers.

UNION PACIFIC RAILROAD

(Offices in 70 cities throughout the U. S. A.)

Circle No. 110 on Card, Page 35, for more information

56% of Food Plants Operate Refrigerated Warehouses

Rapid expansion of frozen food industry seen responsible for growth of cold storage space. One-third of remaining food plants plan to operate their own refrigerated warehouses, one-third undecided on the future and the remaining third will continue to use public space

ANY discussion of refrigerated warehousing inevitably centers around the food industry. This is borne out by this study—Part 3—of general warehousing practices made by DA over a three-month period. While other industries participated in this survey, their number, by industry, is so small that, for practical purposes, analysis of those returns will be omitted.

Food Analysis

The food industry alone, however, has provided an interesting sampling of its warehouse practices. One of the most outstanding facts determined is that 56.25 per cent of the respondents operate their own refrigerated warehouses. This indicates the impact that the technique of frozen food processing has made on the food industry.

Of course, this does not mean that the 56 per cent food plants reporting refrigerated storage use only this facility. Actually, only about one third of the total storage space reported by these plants

is maintained in the freezing range. Nevertheless, refrigerated warehousing has come a long way.

Public Usage

Of the 56 companies maintaining their own refrigerated facilities, about two-thirds also use public refrigerated warehouse space. The number of public refrigerated warehouses used, in addition to the plant's refrigerated facilities, ranges from 1 to 8. It is assumed that the sales distribution method of each plant governs the number of public warehouses employed. About 50 per cent of these public warehouses are used for local distribution purposes, 25 per cent are set up on a regional basis and the balance are tied in with the national distribution program.

The range of temperatures maintained by the reporting food companies varied from —42 deg F to 15 deg F.

Users of public refrigerated warehouse facilities generally seem to be satisfied with the services being offered.

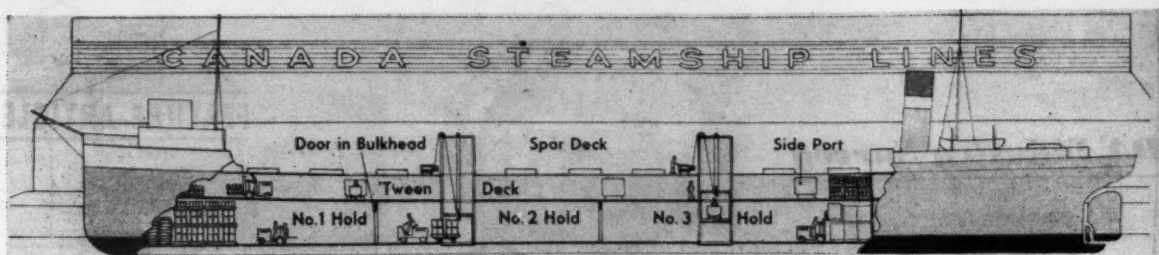
Size Variable

Refrigerated facilities vary from 10,000 sq ft to 300,000 sq ft in the privately operated plants. The largest space, of course, was used by the fast freezing food processing companies. Some 62½ per cent of these plants report fast turnover of the food products.

Of the food plants that did not operate their own refrigerated warehouses, a third planned to acquire such facilities in the future, and another third were undecided, the balance reported no expansion plans in the near future. Practically all of the plants, however, used public refrigerated warehouse facilities. Most of these plants were in the meats and provision business or handled fresh fruit and vegetables. *

Survey Invitation

You are invited to participate in this month's Survey on Power Equipment Maintenance (See Page 35). You are also invited to send in problems for possible survey subjects.



Typical arrangement of decks, holds, side ports and elevators in freighter

Modern Handling Keeps Ship



Fork trucks start unloading operation by clearing the areas on 'tween deck immediately adjacent to ports

A clear 'tween deck is necessary to give tractor-trailer combinations working and turn-around room



Ship elevators with fork trucks, tractor-trains

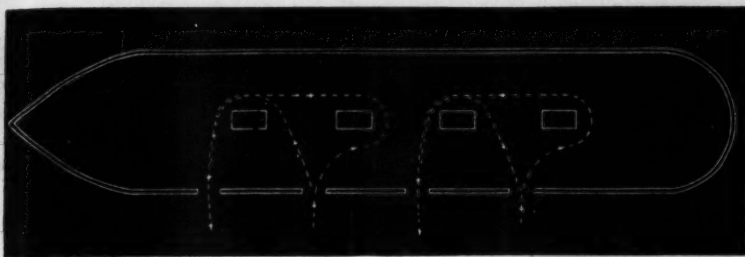
A MATERIALS handling scheme, featured by on-board elevators, unit loads, fork trucks and tractor trains, is credited with helping Canada Steamship Lines, Ltd., establish a navigation record during the Great Lakes season which closed last fall.

More than 60 vessels of CSL which ply the waters of the Lakes and the St. Lawrence, posted the 1952 record despite a general decline in packaged freight handled on the Lakes brought on by the growth of over-the-road carrier systems.

CSL claims to be the only fresh water firm, and

Larger ships have four elevators, three of which work simultaneously in loading





Trailer trains use two side ports to enter and two to leave the 'tween deck

Line "Off Rocks"

and unit loads replace derrick loading on lake freighters

perhaps the only steamship firm, in the world to replace the conventional derrick type ship loading with the speedier fork truck-tractor train-elevator system.

In the past year, the return trip from Montreal to Toronto or Hamilton has been sliced from seven to five days via the new handling methods. As recently as 1935, loading time for the average 250,000-cu ft upper lake freighter was

36 hours. Today's loading time is five hours.

Company officials explain that the transformation was not an overnight proposition. It involved re-equipping ships with side ports, gangplanks and elevators particularly suited to the job. Terminals at major points also had to be tailored to modern handling needs.

Since 1935 the program has progressed along a definite course:

1. Replacement of hand trucking in the sheds by electric tractor-trailer haulage.
2. Handling of freight in palletized unit loads in and out of transit storage sheds by electric fork truck.
3. Stowing of freight in unit loads aboard ship.
4. Encouraging shippers to unitize their freight, and receiving palletized loads directly into transit sheds.
5. Reducing elevator operating time aboard ship.

Unit Loads

It should be stressed that what CSL has done parallels what has been taking place, in a materials handling way, in industry generally. A case in point is the stowing of merchandise in unit loads aboard ship. Ten years ago this was thought to be highly improbable. In common with ocean-going vessels, CSL package freighters had to be loaded tight so that cargo wouldn't shift appreciably in rough weather. Unit-load stowing seemed unlikely without some form of lateral support.

Later, in 1944, with CSL's package freight business threatened

(Please Turn Page)

In unloading ships, trailer trains receive load from elevator in 'tween deck area. Two fork trucks work each elevator loading and unloading pallets



Modern Handling . . .

(Continued from Preceding Page)



Difficult-to-palletize roofing material stowed on 'tween deck



Variety of odd shaped items are detiered in sheds for loading

Goods in temporary storage at Point Edward waiting shipment



by labor shortages, increased wage rates, and a ceiling on freight rates, the solution came to light. Unit-load stowing by means of fork-lift trucks both on the 'tween decks and in the hold was found possible, providing any voids left after stowing loads were filled with smaller units of freight.

MH Saves Line

At the 1950 annual meeting of the Canadian Manufacturers Assn., N. W. Van Wyck, then freight traffic manager of CSL and now a vice president, said that, were it not for the wartime introduction of modern materials handling, CSL would have found it next to impossible to operate.

A typical shiploading operation today, as executed by CSL package steamers serving such ports as Montreal, Toronto, Quebec, Hamilton, Windsor, Sarnia, Port Arthur and Fort William, pursues the following pattern:

Ship arrives at loading berth with its side ports spotted to match gangplanks located in the dock slipway. Gangplanks are placed into position by means of arrangement of pulleys and cables. These gangplanks, specifically engineered for this job, are capable of supporting a 10-ton load over a 25-ft span. They're fastened to the ship by flexible hooks to prevent damage to the ship's plates and, at the shore end, are equipped with a sliding device to permit rise and fall.

Loading procedure calls for filling the holds of the ship first and then loading the 'tween deck. Usually, three of the four elevators (smaller boats have two elevators) work simultaneously. Six fork trucks are lowered into the holds, two to serve each elevator, and another six are placed at the elevator hatches on the 'tween deck.

In the meantime, in the sheds, palletized freight suitable for hold storage is being taken down from tiered piles and placed on trailers, which are coupled two to a tractor.

Train Spotting

The tractor-trailer trains enter the ship through the side ports on the 'tween deck. They're brought into a convenient position where the lift trucks—stationed near the elevators—can pick up the loads and place them on the elevator platform.

The elevator is promptly lowered to the bottom of the hold. There, waiting fork trucks pick up the loads, thus immediately releasing the elevator for its return to pick up another load. This is the latest development and one of the most important. A ship can't be loaded at a rate faster than the operating time of its elevators. By stationing the fork trucks near the elevator to clear it immediately, each elevator can make approximately two round trips each minute.

While the elevator is ascending, the fork trucks below in the holds are stowing palletized loads. Synchronization is precise, and loading speeds of 500 tons per hour have been attained.

When stowage in the holds nears completion and begins to slow down due to the diminishing space, the work trucks are gradually withdrawn. Work on the 'tween deck then commences. First, the tractor-drawn trains bring in the loads and the loading job is ultimately completed by fork trucks shuttling between the shed and the steamers. When the 'tween decks have been filled, the ship sails.

Tractor-trailer trains carrying unit loads aboard, use two of the four gangplanks for entering and the other two for returning empty to the shed for their next loads. Thus, traffic is maintained in a single direction and follows a circular course on the 'tween decks. Tractor-trailer trains come aboard ship at the rate of approximately two trains each minute for each of the three loading positions, or six trains each minute for the entire ship.

An important factor is the manner in which freight is tiered and arranged in the sheds. Nothing rests directly on the floor. Not all goods may be on pallets, bundles of pipe or hay baling ties are possible exceptions, but all have a pair of two-by-fours underneath. Everything can be picked up by fork-lift without manual handling.

Shipper Cooperation

Cooperation from shippers has helped immeasurably. During the 1951 navigation season, 75 per cent of freight received in Montreal arrived in unit loads.

To encourage shippers to palletize, CSL furnishes pallets on load account. Shippers have come to recognize the savings that may be gained when they deliver to CSL on pallets, using trucks and trailers without bodies which enable fork lift trucks to pick off loads from both sides and the end in a matter of minutes.

The old way, not subscribing to this practice, a shipper had to send one or two helpers with his

truck so it wouldn't be held too long in idleness. Depending on the size of his delivery, such a non-unitized truckload would require about 20 minutes to unload.

With the new method, no helper is needed on the trip to the CSL shed. The driver has no manual work to do and no bridge plates needed. CSL's fork-lift trucks do the unloading in five minutes or less. The truck returns with the same number of empty pallets for

use in unitizing the next shipment. Shipper's savings the CSL way amount to an average of 3 man-hours and $\frac{3}{4}$ truck-hour.

Pallet Size

The fact that no one size of pallet is insisted upon and that loads need not be strapped are additional inducements to shippers to palletize their loads. CSL's supervisory longshore workers are
(Please Turn to Page 59)

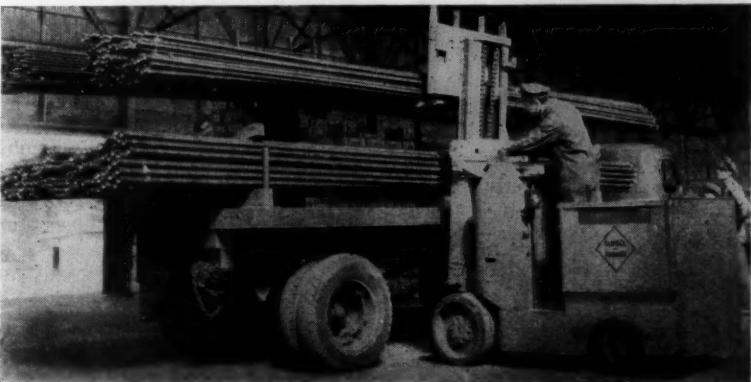


A pair of fork trucks rapidly unload shipper's truck at CSL terminal



Fork truck transfers sheet stock to tractor trailer in unit loads

Pipe is a typical commodity now handled in unit loads without pallet





By performing double duty, this truck may be previewing the era when fork equipment will become industry's basic or only handling unit

What's New in Fork Truck

FORK truck attachments can reduce your cost of operation by helping to make equipment more productive. The costs are sometimes measured in getting more out of your equipment and your employees, as well as eliminating operations or in speeding up the time cycle.

The paper has been prepared in four sections, the need for fork truck attachments, the available fork truck attachments, the missing fork truck attachments, and the ultimate in fork truck attachments.

The Need

In discussing the need for anything, we have to be very sure of a real need. There are too many instances where an individual wants something to do a certain specific job, and—as a result—his desire attains the status of a need. Let us bear in mind that in a country as large as ours, and with the tremendous expense of our industrial enterprise, it really takes a considerable number of common desires to create a real need.

By **W. J. Dernberger**

*Supervisor
Materials Handling Engineering
Metal Stamping Division
Ford Motor Co.*

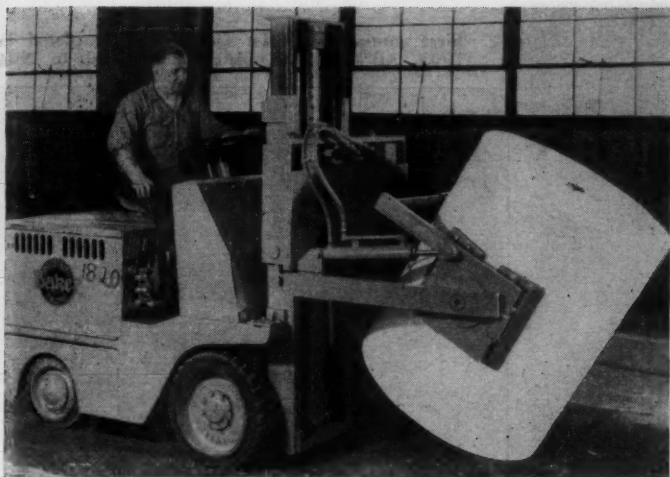
There are a great many places where a certain type of mechanical handling gadget seems to enter the area of needed equipment. For instance, barrel or drum handling fixtures have been developed and placed on the market to handle drums singly, doubly, in lots of four, and in the case of one development, in lots of about 20 drums. So, we are faced with a very detailed research into our activity in an attempt to determine our real need. Do we need to handle drums mechanically in single-drum lots; in lots of two; in lots of four; or just which multiple lot does our need indicate.

Editor's Note—Mr. Dernberger's article is from a paper presented at the University of Chicago Short Course, conducted in conjunction with the Seventh Annual Industrial Packaging and Materials Handling Exposition sponsored by SIPMHE in Chicago, Ill., in October.

Therein is the real complication of our material handling science. Do we need to handle in lots of one, two, four—or four hundred. No one rule, nor no one basic formula, will ever be developed which will apply to any or to all circumstances. You, as interested students of our material handling progression, will have to look very closely at the job in your industry. You will have to determine the real needs for mechanization insofar as fork truck fixtures are concerned. The need, as we see it, is only brought to light by a very intensive study of the job to be done,—and the conditions and circumstances under which it must be accomplished.

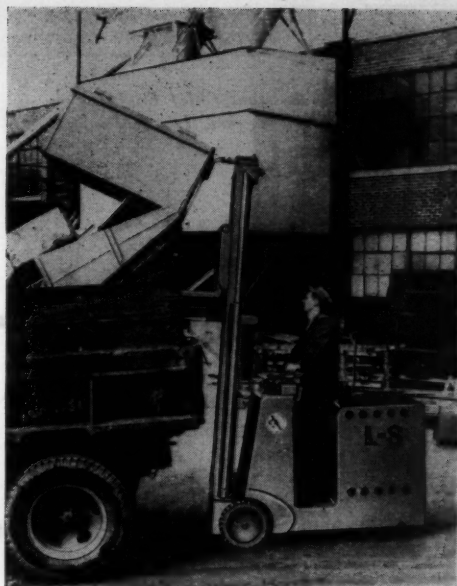
Job Study

All of this does not mean that we can not give you a basic need for better fixtures and attachments. We can, and we will. But, we must emphasize the need for each of you to detail your own needs through an intensive and extensive study of your particular job to be accomplished—in full recognition of the

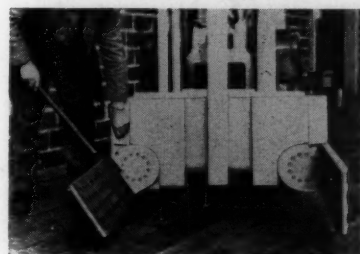


Roll clamp with rotating action can stack vertically or horizontally paper, pipe, etc.

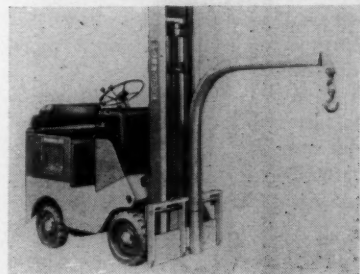
The attachment fixture is the key item in solving the real need — keeping fork trucks busy doing fork truck work



Special hook on top of the mast allows this standard fork attachment to accommodate drop bottom bin for dumping materials in production or scrap operation.



Right: This unit can be converted from clamp to fork in 15 sec. Below, right: Crane arm expedites movement of heavy items. Below, left: Clamping attachment will handle 60-in. crates or boxes



Attachments

conditions under which each job must be accomplished.

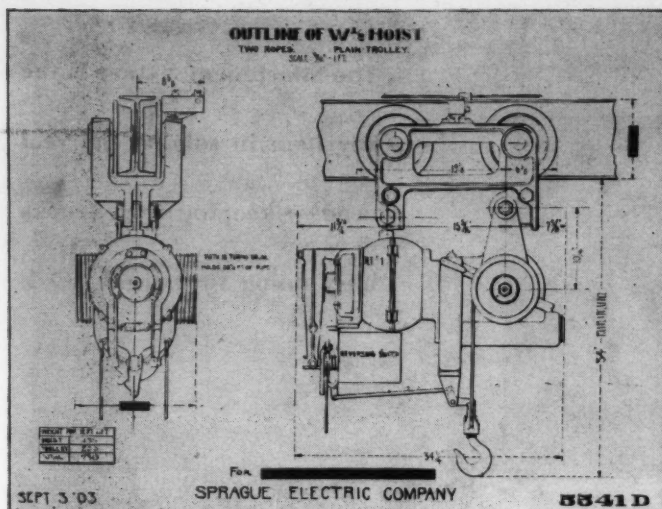
Our description of the need for more and better attachments, is a very simple one. It reflects on the struggle of modern industrial management to increase the productivity of the factory worker. It has to do with the evident wastes of effort, materials and equipment in our every-day handling, transportation and packaging of materials. It really is the elimination of wastes of any and all kinds or descriptions.

Waste Elimination

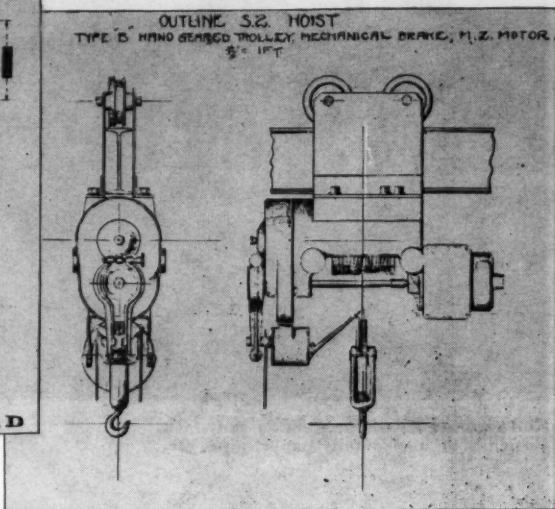
There we have the need as I see it; the elimination of wastes. For the moment, let's trace the progress of productivity as applied to the direct production operation which changes the size, shape or composition of materials. The struggle has been going on as long as the history of man, but we think you agree with us that our modern, industrial management system has made the most noteworthy

(Please Turn to Page 48)

7



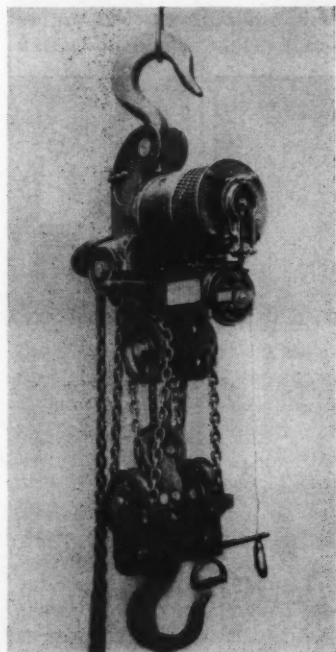
First commercial hoist (left) was completed in 1903. All spur gear hoists (below) built in 1904



By R. Ober, Assistant Chief Engineer
Robbins and Meyers, Inc.

Recent Improvements in Small

This chain hoist employs combination bevel spur and worm gear



Greater usefulness, lighter weight, lower maintenance and

WHEN I was asked to prepare a paper on this subject, my first reaction was, "What is there to talk about?" But after a little reflection, I was surprised to note that a total of 25 or 30 changes have taken place over the past 20 years or so.

These changes can be classified under the headings: Usefulness, less weight per output, lower maintenance costs, and safety.

Usefulness

This is the quality of the hoist that pays you for investing your money in it and makes it more useful to you. The biggest improvement here is in the adaptation of the motorized hoist. The

small electric hoist has made great strides in recent years, replacing the hand-powered hoist. The electric hoist is faster, requires less effort on the part of the operator and thus increases his output.

This motorizing has not been confined to the lifting operation. The motorized trolley has found demand, also.

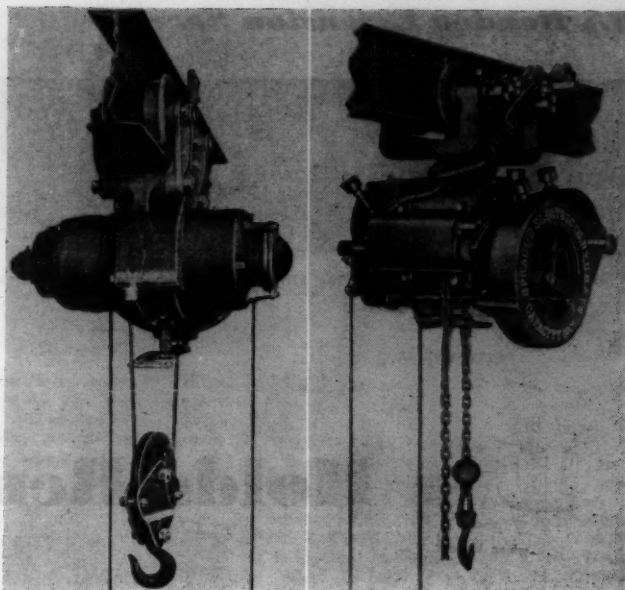
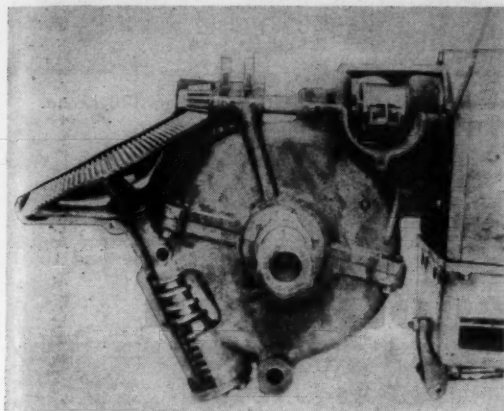
Pushbutton Control

Within the last few years we have seen the most controls for electric hoists change from pull rope, drum type to magnetic push-

Editor's Note—Mr. Ober's article is from a paper presented at the Fourth Biennial Materials Handling Conference, sponsored by Westinghouse Electric Corp., Buffalo, N. Y., Oct. 28-29.

The figure at right is a 1906 model built by Shepard, flanked by a 1907 Sprague electric unit

Below: Built by Yale in 1905, this hoist combines worm gear and bevel spur gear arrangement



Electric Hoists

increased safety are modern hoist features

button type. The advantage of this change is that all hoist motions are controlled by one hand, allowing the operator to use his other hand in guiding load movement. The rope-operated drum switch had a rope for each motion hanging from the overhead hoist. In some instances there was a total of 6 ropes, as in the case of a three-motor hoist.

Pushbutton Advantage

This arrangement required the operator to be careful which rope he pulled in order to be sure of the movement he would get. Since all the ropes hung close together for convenience, frequently the wrong rope would be pulled. In

pushbutton control you have either 2, 4, or 6 buttons in a small box that can be handled by one hand. These buttons usually are in a vertical position and always in the same relative position to each other.

In the past few years the designers of rope controls have made progress in eliminating the confusion caused by use of several ropes by threading two ropes through a wooden handle, with one rope fastened to the handle while the other extends below and is attached to another handle. Thus, the two motion controls are always at different heights and the operation of these controls approaches a one hand operation.

Another arrangement giving the same advantages is to fasten two ropes on a short horizontal bar, one on either end.

Load Spotting

Pushbutton control has another advantage in that you can spot a load closer to the required position. By pushing and releasing the buttons very quickly, you can control movements to a fraction of an inch. This degree of control is almost impossible using ropes due to stretch of the ropes, especially if they happen to be long or the drum switch large and stiff to operate.

Still another advantage of pushbutton hoists is in their ability to accomplish variable speed control. Speed selection by multiple pushbuttons is easy, and you can even get the speed steps by automatic accelerating relays that require the operator to push only one button for each motion, the same as for single-speed control.

Another improvement brought about within the past few years is the use of 30-minute time rating motors. Previously 15-minute motors were used to a large extent. This means that the motor can double its operating time.

(Please Turn to Page 54)



Some 113 guests from 72 firms attended the sessions. The Milwaukee group is shown at left, flanked by Chicagoans



Holds Renegotiation Meetings In Four Cities

**Kenneth G. Smith, leading consultant, outlines renegotiations
structure and answers industry questions on this puzzling law**

IMPORTANT new features of the Renegotiation Act, and problems relating thereto, are being currently discussed at a series of Luncheon Meetings. These meetings, a well known feature of DISTRIBUTION AGE's Editorial Extension Service, started in Philadelphia Sept. 24, 1952.

They were duplicated in Milwaukee, Wis., Chicago, Ill., and Cleveland, Ohio. The meetings were recessed for the holidays, but will continue in mid-January in New York and other cities as found necessary to satisfy reader demands.

Guest speaker at the series is Mr. Kenneth G. Smith, considered one of the nation's outstanding authorities on the subject. The speaker is qualified not only because of his current consulting practice, serving many of the nation's leading corporations, but, also, because during World War II he served on the Army Signal Corp. Renegotiation Panel. This



Kenneth G. Smith
*Noted Renegotiation Authority
DA Luncheon Speaker*

experience, on both sides of the problem, enables him to develop a practical approach.

Basis for passage of the Act was to eliminate excessive profits from contracts having a direct and immediate connection with the Emergency and National Defense. The current law covers the 3-year period from 1951 through 1953. The Act provides that all defense work

amounts received or accrued by a contractor on or after Jan. 1, 1951 and attributed to performance after June 30, 1950, are subject to renegotiation if they aggregate more than \$250,000 in the fiscal year. However, contract brokers whose income is derived from fees or commission, based on contracts or sub-contracts for any year, in which receipts or accruals are more than \$25,000, are subject to renegotiation.

Governmental agencies whose contracts are subject to renegotiation have been listed in a previous article on this subject, which appeared in the September, 1952, issue of DISTRIBUTION AGE.

\$11 Billion Rebate

The importance of properly handling the Renegotiation of Government contracts is exemplified by the fact that during World War II profits considered to be excessive, and recaptured by the
(Please Turn to Page 30)



The series of luncheon meetings opened Sept. 24 with the first session in Philadelphia (above). The speaker is seated, second from right. The four pictures shown below were taken at the Cleveland meeting, Nov. 20, at the Hotel Cleveland. Interest in all four meetings ran high, with question and answer sessions conducted by Mr. Smith running for two hours.



The Roll Call

Philadelphia

W. R. Mitchell, L. Falkenstein, American Pulley; F. J. Dunleavy, L. J. Wenstrup, Yale & Towne; J. J. McLaughlin, Wilkie; O. S. Burruss, R. J. Bryant, National Vulcanized Fibre; L. B. Redmond, B. Schaefer, Transue & Williams; E. J. Fitzgerald, Metal Parts Equipment; E. J. Smith, E. C. Heid, Merchants Warehouse; J. Deveraux, J. Finley, B. A. Dickson, Terminal Warehouse; W. J. Green, H. Seivel, Thermoid.

Milwaukee

B. Soref, Master Lock; V. E. Bunck, W. Fannin, Jacobsen Mfg.; F. Bloomenstiel, W. M. Hannah, Nesco; A. W. Pipenhagen, A. H. Weiss, J. Gleisner, Harnischfeger; W. Warren, Terminal Storage; E. C. Berg, Macwhyte; F. D. Tinknell, G. H. Peifer, Chain Belt; B. J. Paulson, Paulson-Gerlach; John A. Thierry, P. H. Woods, Bucyrus-Erie; C. E. Klumb, West Bend Equipment; H. M. Willenson, American Warehouse; W. L. Wiese, Hillside Transit; E. H. Ottman, National Warehouse; T. B. Willard, Lincoln Fireproof; J. J. Gross, Hansen Storage; J. A. Bertschy, Pack-Rite; R. T. Johnson, J. I. Case; Robert Brechtel, Allis-Chalmers.

Chicago

C. W. Henkle, P. K. McCullough, Mercury Mfg.; H. H. Cohenour, F. L. Stevens, Buda; G. M. Bassnett, Coles Cranes; F. D. Bateman, Griswold & Bateman; W. D. Leet, Allied Distribution; L. B. Darovic, Soo Terminal; H. S. Newell, Western Warehousing; C. R. Mansell, Met-L-Wood; R. L. Altshuler, Pioneer Gen-E-Motor; D. E. Horton, American Warehouse Assn.; W. Castle, Currier-Lee; C. O. and H. C. Dickelman, General Warehouse; M. B. Bowen, W. E. Seeley, Midland Warehouses; E. J. Schwab, Rathborne, Hair and Ridgway.

Also, P. R. Gates, US Cold Storage; E. C. Stetler, Unistrut; A. Russell, Magnesium Co. of America; R. J. Greenebaum, Inland Steel Container; C. M. Stanley, B. B. Weinstein, Blackstone Mfg.; H. F. Partridge, Y. G. McCarty, Anchor Storage; W. G. Petersen, P. R. Godfrey, H. H. Reutel, Stewart-Warner; M. W. Osborne, Automatic Transportation; F. Docauer, Frank G. Hough; C. Quackenbush, H. Berews, Motorola; W. A. Myrmel, Ekco; M. H. Finger, National Warehousing.

Cleveland

R. H. Seaholm, Euclid Crane & Hoist; Mrs. Helen A. Strucher, R. F. Vandemark, Ridge Tool; Gordon Bowman, George J. White, E. J. Scovil, V. A. Pitzer, Baker-Raulang; J. E. Hermann, J. W. Bremer, W. B. Sheehan, Standard Tool; E. J. Swartz, N. Zettler, Union Metal; R. Clancy, Electric Products; R. E. Warren, Warren, Eide & Warren; R. H. Seeley, J. A. Buck, M. E. Case, Jr., Perfection Stove.

Also, K. F. Ode, White Motor; C. W. Choromanski, Rowe Methods; R. H. Miller, E. Doerger, American MonoRail; K. C. Slater, R. P. Anderson, Cleveland Crane & Engineering; H. A. Keske, C. F. Henkel, Lamson and Sessions; S. G. Folk, Thew Shovel; F. D. Garrington, Youngstown Steel Door; R. P. Schultz, Cleveland Cap Screw; F. H. Prusa, National Terminals; S. W. Williams, Moto-Truc; H. McKibbin, Eaton.

DA Holds Renegotiation . . .

(Continued from Preceding Page)

Mr. Smith has prepared two forms listing subject sales (above) and exempt sales (below). Subject chart also lists old DO numbers and AEC agencies. Exempt chart includes raw materials, agriculture and permissives.

SEGREGATION OF SALES CHART - RENEGOTIATION ACT OF 1951			
RENEGOTIABLE CONTRACT SYMBOLS		ALLOTMENT NUMBERS, SYMBOLS & DO RATINGS ON CMP AUTHORIZATIONS	
Test: Contracts or Purchase Orders bearing Contract Number Preceded by Symbols below are Subject to Renegotiation.		Test: Contracts and Purchase Orders with Symbols below may be considered as Subject to Renegotiation unless advised otherwise by Purchaser.	
AEC-PS	Atomic Energy Commission (1)	A-1	Aircraft Department of Defense
AF	Department of the Air Force	A-2	Guided Missiles "
ASP	Armed Services Petroleum Purchasing Agency	A-3	Ships "
AT	Atomic Energy Commission (2)	A-4	Tank-Automotive "
CAC	Division of Accounting Control, Dept. of Com.	A-5	Weapons "
CC	Dept. of Commerce, Office of the Secretary	A-6	Ammunition "
CCANA	Washington National Airport, Dept. of Com.	A-7	Electronic & Communications Equip't. "
CD	Federal Civil Defense Administration	A-8	Fuels & Lubricants "
CG	United States Coast Guard	A-9	Clothing & Equipage "
CST	Bureau of Standards, Dept. of Com.	B-1	Bldg. Supplies & Equip't for Construction "
DA	Department of the Army (3)		Troops "
FMB	Federal Maritime Board, Dept. of Com.	B-2	Subsistence "
GS	General Services Administration	B-3	Transportation - F "
		B-4	

SEGREGATION OF SALES CHART - RENEGOTIATION ACT OF 1951			
MANDATORY EXEMPTIONS		PARTIAL MANDATORY EXEMPTION OF SUB-CONTRACTS FOR NEW DURABLE PRODUCTIVE EQUIPMENT	
1. Contracts with other Governmental Agencies NOTE: Includes any contract by a Department with any: a. Territory c. State e. Any agency or political subdivision of a State		Durable productive equipment means machinery, tools, or other equipment which does not become a part of an End Product acquired by an Agency of the Federal Government. The exemption is based on the proportion which five years is to the normal service life per Bulletin F of the Bureau of Internal Revenue.	
2. Cost Allowance for Agricultural Commodities and Raw Materials in the case of integrated producers. NOTE: An allowance representing the amount normally exempt at the first stage of industrial use.		Years Equipment Depreciated	% Exempt From Renegotiation
3. Profits from increment in value of excess inventory NOTE: Profit = Invoice - Cost		10	50%
			50%

government, totaled approximately \$11 billion. There is little doubt in the minds of well informed economists that more than one company contributed unnecessarily to this sum as a direct result of poor preparation and presentation of information required by the government.

Segregation of Sales

Without a full realization of what constitutes renegotiable business, a report based principally on segregation of sales is of little value. It must be realized that now there are 15 agencies, or departments, of the Federal Government whose contracts are subject to renegotiation. Approximately 28 different contract key symbols indicate whether a contract issued by an agency must be renegotiated.

Under existing regulations, there are more than 50 CMP or DO symbols, which have been allotted to agencies, not to mention a like amount of the old DO numbers, which have been used

by prime contractors and agencies when ordering materials necessary for defense work. These symbols are an indication that the sale may be subject to renegotiation. In addition, some 65 agencies of the AEC are acquiring materials which are subject.

All these factors were clearly brought up by the speaker at each meeting. Mr. Smith then covered the various procedures step by step. He pointed out, for example, that methods most commonly used, and which have been approved in the past, include the following:

Common Procedures

1. Actual method is where prime contracts, sub-contracts, purchase orders, etc., can be clearly identified as National Defense Business.

2. An allocation method based on industry, customer or consumer group use of the product.

3. Products or product group classification, which clearly indicates the potential end use of the article.

4. Where a division, department or plant of a company is devoted entirely to defense work.

5. An allocation method based on government, trade association or other reports whereby the end use of the products may be determined.

6. Spot checks of detailed transactions of part of the fiscal year and applying the percentages to the total sales.

Excessive Profits

At each meeting, the speaker pointed out in great detail that each individual contractor is judged on the basis of his own particular case. There is no industry base, formula or standard by which a company is measured.

Mr. Smith stressed the fact that the Renegotiation brief or report, is perhaps the most important single report a contractor must prepare if he hopes to receive favorable consideration and a minimum rebate. He pointed out that this report should not be an

added assignment to the busy comptroller, treasurer or some other accounting executive.

The report requires more than accounting "know how." It should be prepared by someone with the ability to interpret those factors not only in their true light but in the best interests of the company. Usually the sales department, or the advertising department, is best qualified to prepare the report.

To prepare a good brief properly a complete story must be told. This very often includes long periods of retooling, personnel training, acquisition of new production facilities, handling subcontractors, and overall supervision to give the governmental agencies exactly what is required with the greatest possible efficiency and within the least possible time. Such a report will permit the Renegotiation Board to make a competent determination, fair to both the government and the contractor.

Regulation Excerpts

Current military renegotiation regulations, Mr. Smith pointed out, read as follows:

"In general, reasonable profit should be determined by overall evaluation of the particular factors present, without limitation or restriction by a fixed formula with respect to rate of profit, or otherwise.

"Renegotiation proceedings should not result in a profit based on the principle of a percentage of cost. Contractors who sell at lower prices and produce at lower cost through good management, improved methods of production, close control of expenditures, and careful purchasing, will receive a more favorable determination than those who do not. Claims of a contractor for favorable consideration must be supported by established facts, analysis and appropriate comparisons."

A more detailed list of the factors to which the Board gives consideration in determining the excessive profits of the contractors is listed in a box at the top of this page.

(Please Turn to Page 60)

Seven Most Important Factors

Q. What are the factors considered to be important by the Renegotiation Board?

A. 1. Efficiency of the contractor with particular regard to attainment of quantity and quality production, reduction of costs, and economy in the use of materials, facilities and manpower.

2. Reasonableness of costs and profits, with particular regard to volume of production, normal earnings, and comparison of war and peacetime products.

3. Reasonableness of return on net worth with particular regard to the amount and source of public and private capital employed.

4. Extent of risk assumed, including the risk incident to reasonable pricing policies.

5. Nature and extent of contribution to the defense effort, including inventive and development contribution and cooperation with the Government and other contractors in supplying technical assistance.

6. Character of business, including source and nature of materials, complexity of manufacturing techniques, character and extent of subcontracting and rates of turn-over.

7. Such other factors as the consideration of the public interest and fair and equitable dealings may require, which factors shall be published in the regulations of the Board from time to time as adopted.

—DA—

Outline for Preparation of a Report

A. Accounting

1. Segregation of Sales

- (a) Accounting aspects
- (b) Legal interpretations
- (c) Method or base for segregating sales

2. Allocation of Costs

- (a) Sales ratio
- (b) Actual
- (c) Combination of Actual and Sales
- (d) Special Methods

B. Research

The accumulation of material is necessary for a good written report and the type of material depends on the company and the Renegotiation Program it has adopted. To be effective, research must cover every phase of company operation.

C. Report

Management should not delay until some months after the year's end to consider composition of the report. This important document should be on the highest editorial plane your company can reach.

—DA—

Common Pitfalls of Renegotiation

Management in approaching the problem of Renegotiation must realize that there is no typical Renegotiation case. Each proceeding covers factors not necessarily similar to other companies. What, therefore, are the pitfalls which many corporate officials already have made and, unfortunately, will continue to make?

1. "We have been through this before" attitude, "and we know all the answers."

2. Sit tight until the Renegotiation Board finds us.

3. The information is not due until after Income Tax Return is filed and must take its turn.

4. Since Renegotiation requires a segregation of sales and allocation of costs it is an accounting job so an accountant should be placed in charge.

It's Later Than You Think

- Q** Our entertainment bill often includes expenses for employees' and customers' wives, are they deductible?
- Q** About 100 of my customers attended our daughter's wedding, are liquor and food used deductible?
- Q** How about the law on capital gains on warehouse receipts, can I pay only 50 per cent on the profit?
- Q** I work for an employer and also conduct my own business in another city, what about travel expenses?
- Q** Can I deduct from my gross income such items as liquor bills and other entertainment expenses?
- Q** I keep show horses and dogs, is the expense involved in their maintenance and showing properly deductible?

Debatable Tax Deductions

Liability or asset—uncertain deductible items

RECENTLY the writer traveled several North and North-western states and talked with numerous warehousemen, transportation executives and handlers of merchandise. Many are concerned over valid deductions they may make from their annual income when filing their federal tax returns.

Readers asked these and other questions: "What are lawful deductions for entertainment, liquor, theatre tickets, automobile expenses, hotel, meals, etc.? Can a taxpayer deduct automobile expenses incurred when going to and from his place of business, or office in the same city or different city?" Other readers asked about different phases of the law on such subjects as "Valid Capital

Gains" on futures, merchandise held in storage for future delivery, real estate, etc.

An important point of law decided by the U. S. Supreme Court is that while a taxpayer has only three years to file a claim against the government for tax overpayment, the government has four years to sue and recover back taxes, interest, penalties, etc. from a taxpayer who unintentionally filed an erroneous tax return and in which he took deductions which he cannot prove are necessary and reasonable.

Valid Expenses

A reader asked: "Can I deduct from my gross income such items as liquor bills, and other entertainment expenses?"

According to a late higher court decision, the answer is yes, if you keep books showing the dates the purchases were made and the amounts expended for entertainment of customers.

For example, in Case No. 1, 14 T. C. No. 9, it was shown that an official always kept liquor in his office for customers who came in during the year. The taxpayer deducted as expenses from his gross income the sum of \$424 for liquor. The court approved the deductions.

In Case No. 2 the court approved deductions of several thousand dollars expended by the taxpayer in the purchase, maintenance and showing of show-horses and show-dogs. The taxpayer proved positively that the color scheme and

- A** You will be allowed legitimate expenses for employees and customers, but wives are "extra-curricular."
- A** Hardly, it may have been "good business," but Uncle Sam takes a dim view of picking up the wedding tab.
- A** Yes, if it is decided that the receipts are capital assets as compared to stock in trade, on inventory.
- A** Travel expenses are uncertain deductible items, often considered in proportion to your gross income.
- A** If you keep books showing the date of purchase and amounts expended you have a valid deduction.
- A** Simply prove that color scheme and insignia on the animals correspond with your business insignia.

And Their Legal Status

must be studied carefully before they are filed

insignia on the horses and dogs correspond to the general color scheme, insignia and trade-mark used in the taxpayer's business.

Also, see Case No. 3, 16 T. C. No. 50. Here a dealer deducted in a single year \$8,256 for theatre, night club and cocktail parties given for his customers and their wives. The court approved allowance of \$5,500 of these expenses. The court refused to approve the total \$8,255 deduction because the taxpayer's own wife and the wives of the customers attended the parties, and their expenses were included in the deduction.

For comparison, see Case No. 4, 14 T. C. 173. In this case the court refused to allow a relatively small deduction of \$78 for hotel and meal expenses because the

taxpayer failed to keep accurate records.

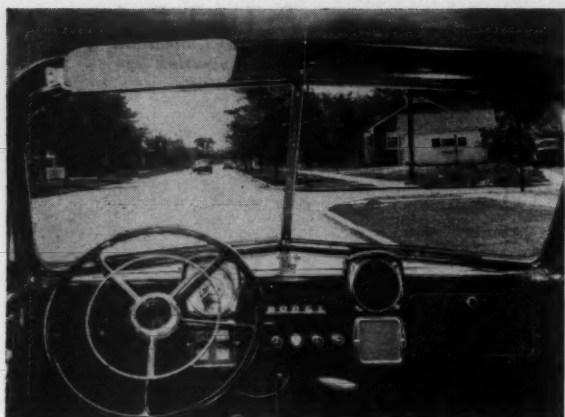
Burden of Proof

Although a warehouseman, distributor, buyer, seller or handler of merchandise may for several years pay his income taxes on the basis of claimed deductions, and with no objection of the commissioner of Internal Revenue, yet if and when his tax returns and papers are checked by an agent of the Internal Revenue department, all improper deductions will be disallowed which he cannot positively prove actually were utilized for purposes necessary and reasonable in his business, and he is subject to payment of back taxes, interest and penalties for similar and all other errors

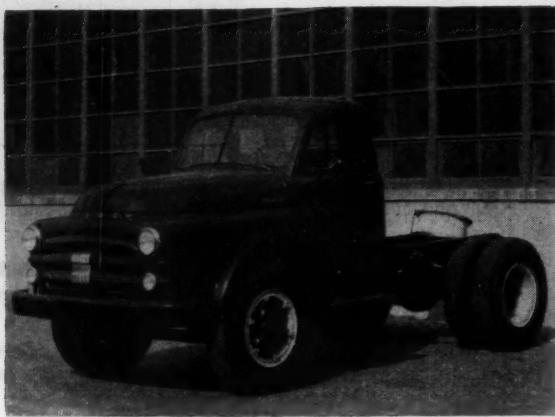
during the previous four years. If the commissioner, the creditor, disallows your deduction you, the debtor, must prove to the court by reliable and authentic evidence that the claimed deductions are justified by provisions of the Internal Revenue Code. Neither ignorance nor good intentions will excuse you.

For illustration, Case No. 5, 14 T. C. 1151, the Tax Court of the United States held a taxpayer liable in heavy penalties, interest charges and also criminally liable for his ill-prepared and incorrect income tax return, although the testimony clearly proved that he paid an agent in the Internal Revenue department to prepare and formulate his tax return.

(Please Turn to Page 50)



All-road visibility, provided by 882 sq in. of safety-tinted glass area, is one of 50 new features in the B-4 series.



This 3-ton model of the new B-4 Series trucks has 145 hp, in addition to increased gross weight capacity of 41,000 lbs.

New Dodge B-4 Series Offers Automatic Transmission

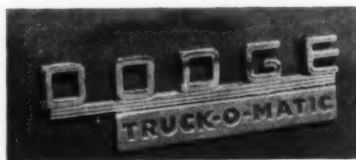
Self-shifting transmission, increased power, three new engines, improved brakes among 50 features modernizing Dodge trucks

DODGE announces 50 new features in its 1953 B-4 Series of Job-Rated trucks, including the new Truck-o-Matic transmission. This new transmission with gyrol fluid drive frees the driver of almost all manual gear-shifting, yet it does not take away any of the driver control so necessary in truck operation.

Simple Operation

The driver simply steps on the accelerator pedal to go, and on the brake pedal to stop. Gearshift lever and clutch pedal, although retained, can be forgotten in normal driving. The new Dodge truck transmission does the actual shifting, but the driver determines when the shifts should be made. The new transmission has four speeds forward, plus one reverse.

The gearshift lever on the steering column is used only at those times when the driver wants to move into or out of the power range or when he wants to move into reverse.



Higher Road Speeds

Growing demand by haulers for higher road speeds and over-all performance with maximum loads resulted in Dodge introducing three entirely new engines and also increasing power output on 1/2, 3/4, 1 1/2, 2, 2 1/2 and 4-ton trucks.

The new 413-cu. in. displacement engine for the 4-ton model, for example, has twin carburetion which develops 171 gross hp as compared with 154 gross hp developed by the engine used in previous 4-ton models. The maximum gross vehicle weight rating has been increased to 40,000 lb and maximum gross combination weight rating has been increased to 60,000 lb.

Changes in spring specifications and heavier springs are available

in some models for owners hauling heavy cargoes.

Safety-Tinted Glass

One of the safety features of the new B-4 series, is the tinted glass available in all glass areas for all models. The 882 sq in. of glass area in windshields provides unusual visibility for drivers to see the road immediately ahead of the front bumper, high traffic lights, and approaching drivers on side streets.

New streamlined rear fenders have been introduced on all pickup models. To make them more grain tight, the bodies have improved sealing around the tailgate. A new 1/2 ton pick-up of 56 cu ft capacity with 116-in. wheelbase has been added to the new line.

The cab underbody has been reinforced by welding a heavy transverse member to the lock pillars and underbody. This provides a more rigid tie and more secure mounting to the frame.

(Please Turn to Page 47)

For prompt service, use the postage-free postcard provided here for your convenience in securing FREE LITERATURE and NEW PRODUCTS information described in this issue of DISTRIBUTION AGE. All material FREE, unless otherwise noted, as in the case of text books.

Corrosion Preventive

A new Metallizing Engineering Co., Inc. bulletin illustrates the industrial applications of metalized zinc or aluminum. Underground conduits, tanks, bridges and trestles, marine and fabricated steel products are some of the industrial applications illustrated.

Circle 60 on Service Card, Page 36

Steel Shelving

Penn Metal Corp. has published a new Penco Steel Shelving Catalog, presenting a wide line of adjustable steel shelving for factories, offices, shops, stores, schools, and institutions. The unusual design flexibility and interchangeability of parts permits wider uses.

Circle 61 on Service Card, Page 36

Resilient Floor Surface

The complete story of Bitucote Mastic Flooring is available in the new, illustrated bulletin just published by Bitucote Products, manufacturer of emulsified asphalt products. Excellent results are obtained from its use over worn wood or concrete and under-layment.

Circle 62 on Service Card, Page 36

Conveyor Nomenclature Defined

"Conveyor Terms and Definitions," a manual on standard nomenclature for conveyor types and parts, has been published by the Conveyor Equipment Manufacturers Association. The manual contains about 1500 listings and line drawings of more than 80 types of conveyors and parts. For major items it includes terminology in French, German, Italian and Spanish as well as English.

Circle 63 on Service Card, Page 36

New Reliance Products

Reliance Electric & Engineering Co. has issued a 4-page bulletin describing and illustrating its principal products—motors and related power-transmission equipment. Functions, advantages and service applications for which they were designed are indicated.

Circle 64 on Service Card, Page 36

Power-Driven Dumbwaiter

A four-page, two-color catalog from Sage Equipment Co. describes a new power-driven dumbwaiter which has fully automatic push button control stations for conveying up and down between floors.

Circle 65 on Service Card, Page 36

Metal Framing

Unistrut has published a new 83-page pocket size booklet, describing its framing products in great detail with diagrams, photographs, specifications and graphical symbols.

Circle 66 on Service Card, Page 36

Flexible Tubing

Just off the press, in the form of an illustrated booklet, is an 8-page catalog describing the industrial uses and specifications for flexible tubing.

Circle 67 on Service Card, Page 36

BOOKS

Arc Welding

"Pocket Manual of Arc Welding" by Lew Gilbert, editor of "Industry and Welding Magazine," is a handy reference book for welding engineers, supervisors, inspectors and management personnel. This book features how-to information, written in a down-to-earth manner, on welding of mild, alloy and stainless steels, as well as hard surfacing and welding of other ferrous metals. Industrial Book Co., 1240 Ontario St., Cleveland 13, Ohio; 172 pages; \$1.25.

Manual MH Equipment

The Caster and Floor Truck Manufacturers' Association has published a new "Handbook of Manual Materials Handling Equipment." Recognized as the definitive text in this field, it is designed to acquaint both industry and layman with the terminology and basic fundamentals of this equipment. Caster and Floor Truck Manufacturers Association, 27 E. Monroe St., Chicago 3, Ill.; 48 pages; \$1.

Guide to Air Shipping

The latest revised issue of the Guide To Air Shipping Via The Port Of New York has been published by the Aviation Department of The Port of New York Authority. Detailed information on regulations, facilities, practices, routings, services, charges and rates is included.

Circle 68 on Service Card, Page 36

Humidity Indicator Cards

Culligan Zeolite Co. has issued a bulletin describing the two revolutionary humidity indicator cards developed and approved by the Air Force and Army Signal Corps. They will not turn permanently blue when exposed to an atmosphere containing ammonia vapor.

Circle 69 on Service Card, Page 36

Tin Abundant in Malaya

The plentiful supply of tin in Malaya and the vital role tin plays in the free world are the themes of a 20-page, illustrated booklet in three colors, published by The Malayan Tin Bureau.

Circle 70 on Service Card, Page 36

Bag Conveyors

Richardson Scale Co. has released a new 4-page 2-color bulletin on its specially-designed V-Belt conveyor for transporting paper, cloth, or burlap bags from filling and weighing equipment through bag-closing operations.

Circle 71 on Service Card, Page 36

Cushion Boxes

A bulletin describing its new cushioned construction eliminating the need of a corrugated inner liner has been published by the Robertson Paper Box Co. An interior wall literally suspends the bottle in the center of the carton.

Circle 72 on Service Card, Page 36

Industrial Tape

A new bulletin from Chicago Printed String Co. describes and illustrates the numerous industrial use for their non-woven, cotton, industrial tape, Print-Ad-String. It is available for identification and advertising purposes in any color or combinations of colors and imprinted as desired.

Circle 73 on Service Card, Page 36

Turret Trucks

Hyster has released a new catalog featuring their line of turret trucks for "horizontal" materials handling in every kind of industry. Specifications and illustrations are included in the catalog of the five models manufactured.

Circle 74 on Service Card, Page 36

DA *New* PRODUCTS

FOR FURTHER INFORMATION USE READERS' SERVICE

Greater Payload and Easy Maneuverability New Features of One-Man Dump Truck



Designed and engineered throughout exclusively for dump service, Cook Bros. Equipment Co. features a 15-ton capacity payload and easy maneuverability with its new "M-310" Dump Truck.

To increase total legal payload capacity, greater advantage has been taken of the load-carrying ability of the front axle, by shifting a portion of the payload weight to the front. A rugged, heavy-duty front axle has been provided to absorb this greater weight, with safety margin to spare.

The powerful Ford 317 V-8 overhead valve, 155 HP engine is easily accessible for service and repair, simply by elevating the sturdy one-piece steel hood. A dual gear drive, dual center chain drive, or double reduction axle with third axle attachment are available.

The wheelbase length of the unit illustrated here is 174 in., centerline to centerline. Brakes are full air. Cook Bros. hydraulically powered telescopic hoist

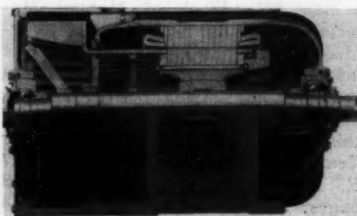
eliminates heavy mechanical levers, arms, cams, and other parts subject to wear and failure. A simple arrangement of telescoping sleeves, hydraulically actuated, make up the basic hoist mechanism.

A completely unobstructed view from the single passenger cab, quickly adjustable hydraulically suspended seat, oversize steering wheel (power steering is optional) and easy-to-read instruments are other driving features.

Circle 11 on Service Card, Page 36

High Slip Motor

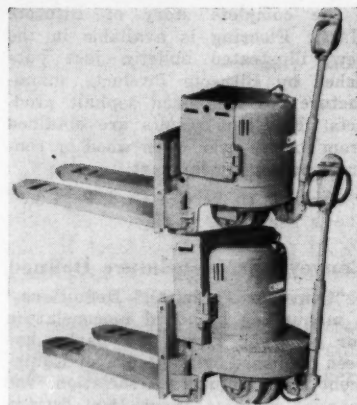
A new totally enclosed, fan-cooled, high-slip induction motor, designed for use in acceleration



of high-inertia loads such as punch presses, centrifuges and hoists, has been announced by General Electric Co. The new motor, Type KRX, is 30 per cent smaller and 40 per cent lighter than the conventional high-slip motor. It is available in 30 to 150 hp at 900 and 1200 rpm, 5-8 and 8-13 per cent slip; voltage ratings are 220, 440 and 550.

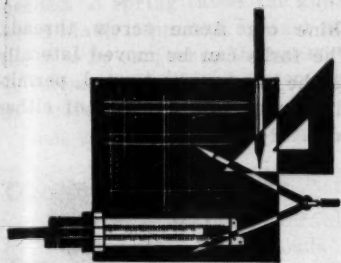
Circle 12 on Service Card, Page 36

'53 Model Pallet Trucks



Clark Equipment Co.'s new models have a capacity rating up to 6,000 lb and can be supplied with pallet forks to handle any size pallet, either single or double faced. They feature double hoisting cylinders for lifting the loaded pallet, 5-hp motor-in-wheel drive, full time delay control with all contactors interlocked for progressive speed positions, and positive safety-spring return handle which applies brake and cuts off power.

Circle 13 on Service Card, Page 36



CARD.....

Magnesium Barrel Skid

Magline Inc. announces a new, all-magnesium barrel skid for drum and barrel handling. Welded throughout, the barrel skid combines extreme light weight and ease of handling, with certified, capacity-rated strength. The skids are available in standard sizes, ranging from 5 ft to 18 ft in length as well as special sizes.



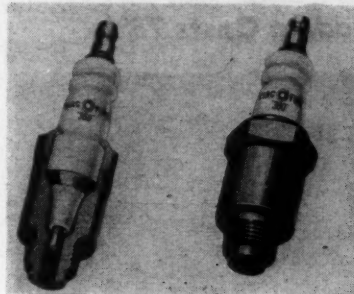
Circle 14 on Service Card, Page 36

for bulk materials such as grain, pellets, flakes, seed, chips, and fertilizer. Manufactured by Canton Stoker Corp., "Flo-Tubes" can be installed on an incline or horizontally and carry up to 10,000 lb of coal per hour.

Circle 15 on Service Card, Page 36

Hi-Compression Plugs

Spark plugs designed to eliminate fouling common in new high



compression engines have been introduced by Circ-O-Fire Spark Plug Co. The new plug fires from a single round center electrode to the metal shell of the plug, which acts as a ground, replacing the conventional second or bottom electrode. Thus the plug has 360 deg firing around the center electrode, rather than a spark jumping from point to point.

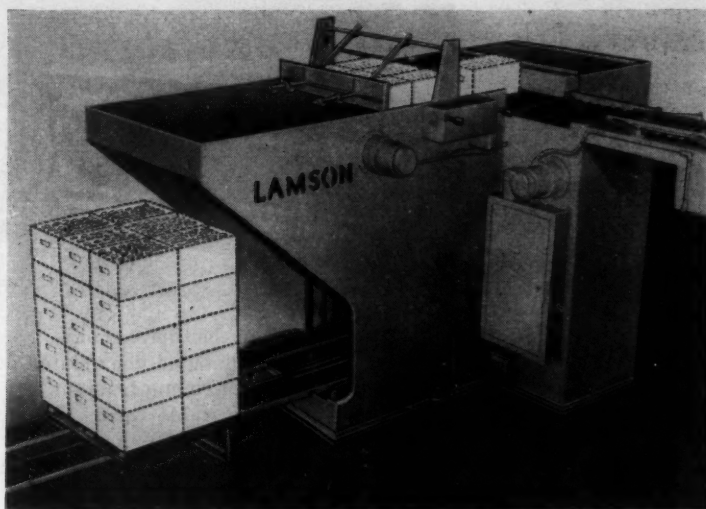
Circle 16 on Service Card, Page 36

Improved Fork Truck

Principal features of the improved Yardlift-150, pneumatic-tired fork lift truck of 15,000 lb capacity, announced by Clark Equipment Co., are increased horsepower, lighter weight and better hydraulic steering. A new power plant develops more hp at fewer rpm.

Circle 17 on Service Card, Page 36

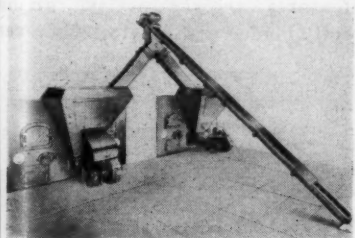
Automatic Pallet Loader for 36-in. Wide Pallets



Circle 18 on Service Card, Page 36

Screw Feed Conveyor

The screw feed used in coal stokers has been adapted and is proving highly successful as a larger scale automatic conveyor



Lamson Corp. announces a new Automatic Pallet Loader for 36-in. wide pallets. Previously 40 in. was the minimum pallet-width handled by the mechanical.

Designed to eliminate manual pallet loading in mass production operations, cartons or cases are conveyed to the top of the loader where electro-mechanical devices position them and push them onto pallets.

Not only does the machine position alternate containers for best

pallet arrangement, but when more than one size containers is in production, the machine automatically positions intermittent predetermined pallet lots so that each is stacked properly on its pallet. A magazine within the pallet loader automatically supplies pallets as preceding loads are completed.

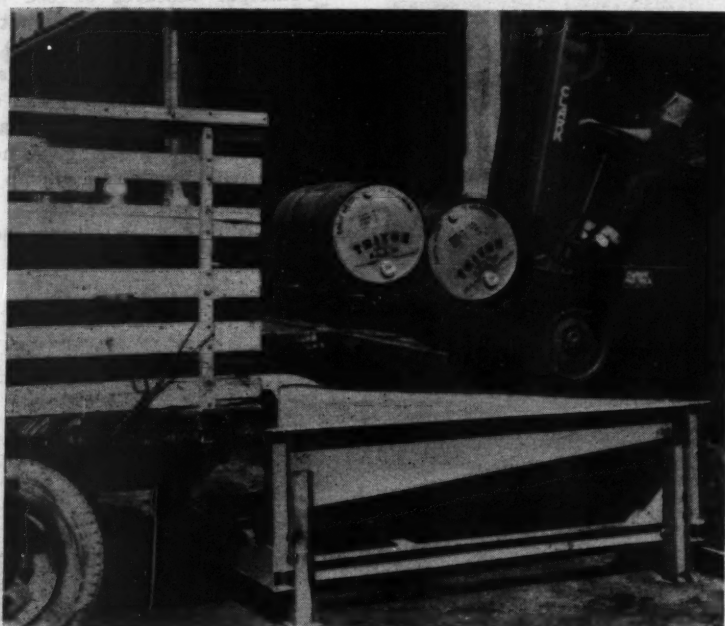
When used in bottling plants, the Automatic Pallet Loader handles both "flat" and full size cases.

(Please Turn Page)

DA *New* PRODUCTS

Continued from previous page

Portable Ramp Reduces Loading Costs 75%



Easily installed in five minutes at any loading dock, this portable loading ramp manufactured by John B. Illo Engineering Co. is claimed to enable one man to perform the work of ten. Its hydraulically operated dock can be adjusted to any truck bed height in a few seconds.

Available in two models, manual and electrically powered, the ramp consists of 110-volt, single phase ½-hp ball-bearing drip proof motor directly connected to a ¾-in. standard Viking 350-lb pressure hydraulic pump. Plugged into any light socket, the dock is ready to operate.

Many leading firms have found it eliminates costly standby time of trucks and men waiting to load or unload.

Its deck travel of 24 in. enables trucks of any bed height to be loaded or unloaded easily. Fork

lifts can be driven onto trucks and the diamond floor plated deck assures maximum traction.

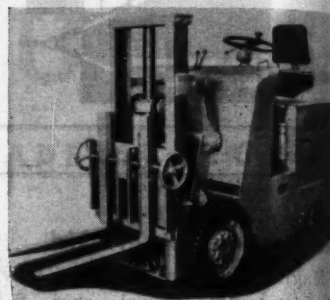
An adjustable throw plate can be easily raised or lowered for installation inside buildings without interfering with doors. The throw plate can be locked in horizontal position during loading, as can the deck, preventing accidental moving.

Circle 19 on Service Card, Page 36

Rapid Fork Adjustment

For those fork truck users who must make frequent fork adjustments, yet maintain positive positioning, Elwell-Parker Electric Co. announces a unit known as "screw adjusting forks." The device consists of a frame which attaches to the standard load elevator and supports a pair of large diameter screws with ma-

chine cut Acme screw threads. The forks can be moved laterally as the screws are turned, permitting independent action of either fork.



Circle 20 on Service Card, Page 36

Cinder Spreader

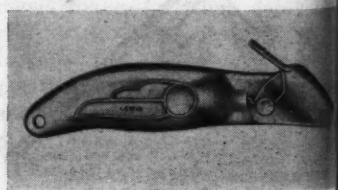
The Hercules Cinder Spreader spreads full-road or half-road width at one pass. It can be controlled from the cab by a single driver-operator or may be controlled manually. A new preheat uses the truck engine's exhaust heat to prevent large chunks of moist or wet cinders from forming next to the body conveyor chain. Standard hopper sizes of 5 and 9 cu ft, with 11-ft length and other capacities and lengths are available on special order.



Circle 21 on Service Card, Page 36

Safety Knife

This sharp cutting tool meets the need for an absolutely safe knife that will protect the user from injury. Manufactured by Flash Box Opener Co., the knife features trigger action, giving full blade visibility wherever

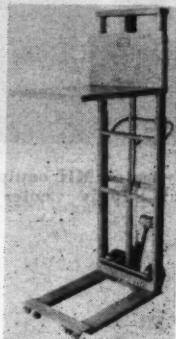


needed. A spring raises the guard when blade is pressed against material to be cut; when the pressure is released the guard automatically covers the blade.

Circle 22 on Service Card, Page 36

One-Man Lift Stacker

This one-man operated hydraulic lift stacker lifts $\frac{1}{4}$ -ton loads to maximum elevation of 58 in. Manufactured by Port-A-Lift Co., the stacker is claimed to be the fastest foot operated lift truck on the market. The platform travels $2\frac{1}{2}$ in. per stroke of foot pedal and a Magic Touch Release lever permits the operator to lower the platform automatically to any level at any speed.



Circle 23 on Service Card, Page 36

Spark Plug Viewer

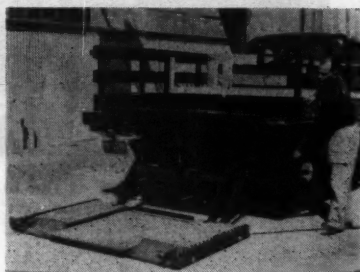
A new inspection tool, designed for the close examination of automotive spark plug firing ends, is being marketed by Champion Spark Plug Co. Combining a flashlight and magnifying glass of $2\frac{1}{2}$ power, it reveals incomplete or uneven abrasive cleaning, detects cracked or chipped insulator, checks condition of electrodes sparking surfaces and permits examination of fuel deposits for entire length of insulator nose.



Circle 24 on Service Card, Page 36

Elevating Tail Gates

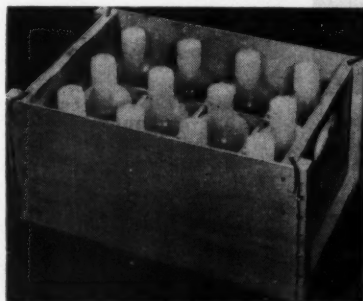
Gar Wood Industries have made elevating tail gates with specially designed roller assemblies for Consolidated Vultee Aircraft Corp. to transfer heavy, yet delicate armament equipment from cribs to airplanes just off of the assembly line. The roller assembly on flat-bed trucks permits the pallets to be easily lifted by hydraulic power and rolled from the lift gate onto the truck bed.



Circle 25 on Service Card, Page 36

Wirebound Bottle Case

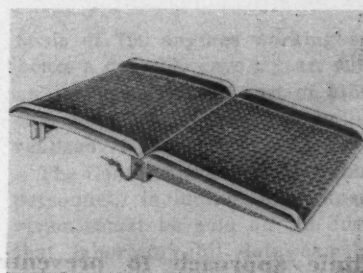
Designed and produced by American Box Co., this new wirebound container cuts weight approximately 20 per cent and costs less to make. Primarily developed for handling bottled battery-acid for The Firestone Tire & Rubber Co., the container is seen as a boon to shippers of all types of liquids.



Circle 26 on Service Card, Page 36

Truck Loading Ramp

To meet the needs of not only normal, but special truck loading and unloading conditions, Penco Engineering Co. has developed a two-section ramp for truck docks. It combines a regular Penco truck ramp and a special ramp with fixed-rise legs. Made from lightweight magnesium, the ramp has capacities from 1,000 to 5,000 lb.



Circle 27 on Service Card, Page 36

Steel Shelving

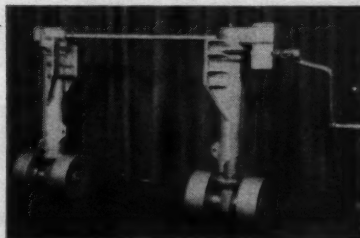
This shelving, manufactured by Karl A. Herman Co., uses the sectional idea and any number of units can be combined to provide the storage area needed. Offered in two standard designs, the one shown is 32 in. long and 87 in. high with 11 shelves. The lower part is 24 in. wide and the top shelves 12 in. wide. The other design is the same but has no extension lower part; all shelves are 12 in. wide.



Circle 28 on Service Card, Page 36

Aluminum Landing Gear

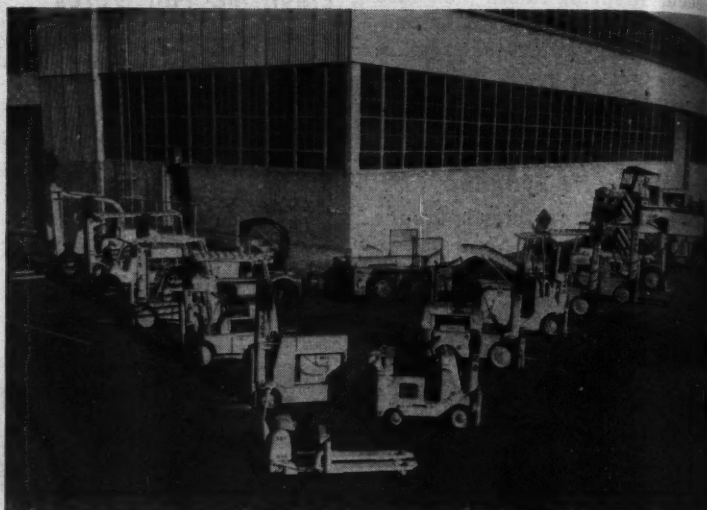
Binkley Mfg. Co. has marketed a new all aluminum landing gear, cast from the new aluminum alloy Almag 35. All of the screw mechanism and gears are made from alloy steel and the landing



gear is available in either single or two speed. The two speed gear box is detachable and weighs 186 lb.

Circle 29 on Service Card, Page 36
(Please Turn to Page 52)

Clinic approach to preventive maintenance of handling gear increases span between engine overhauls from 700 to 2,000 hours



Some of the many types of MH equipment used at the world's largest Naval Supply Center are shown here



Battery charging plant is pictured with a truck specially equipped to handle large batteries

Navy PM Program Cuts Handling

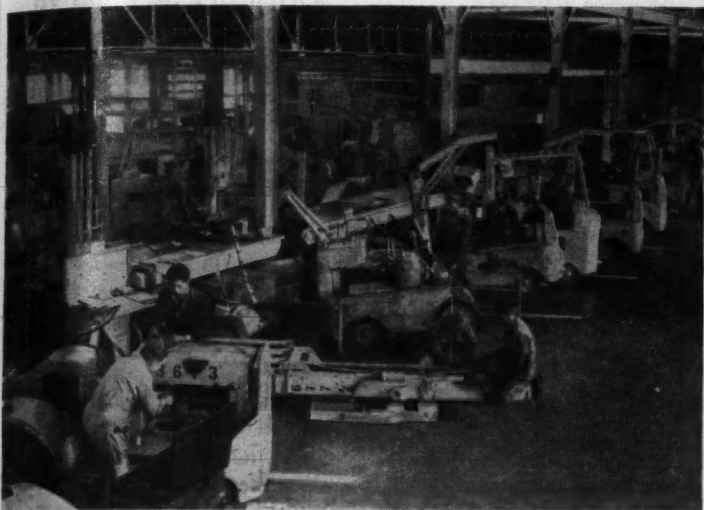
Battery field service at the Naval Supply Center is accomplished in this complete battery section



REHABILITATION of weary and ailing mechanized bodies at the Oakland (Cal.) Naval Supply Center Materials Handling Clinic has effected a yearly saving of \$100,000 on engine overhaul alone.

Under the scheduled preventive maintenance program, the average service period between engine overhauls has jumped from 700 hours to 2,000 hours. Equipment treated in the clinic includes fork trucks, industrial tractors, pallet jacks, industrial trailers, and other handling gear used by the Navy.

Mechanical doctors at what is probably the largest service center of its kind in the country operate on the same principle advocated by their professional counterparts—physicians and dentists, who urge scheduled annual or semi-



The center section of the huge shop, where 1,800 pieces of equipment are overhauled each month, is an efficient assembly line operation

ing Gear Maintenance

annual visits, routine check-ups, etc. In the materials handling equipment shop at the Oakland base it's called preventive maintenance.

How It's Done

How is it done, and what brought about the almost three times average usage between overhauls? Like the medical analysis of human blood and waste, the mechanical "MDs" at Oakland proceed on the basis of oil—and motor—analysis. Warnings show up in the motor, as well as in the human analysis.

W. E. Harris, maintenance division foreman, says that, in each group from private and government agencies inspecting and visiting the shop, there are always several who express real interest

in its efficiency, results and the aid oil analysis would be to many of the large public and private transportation companies.

The industrial laboratory at Mare Island Naval Shipyard initiated its used lubricating-oil examination service in 1946, at the instigation of the Naval Supply Center IMHE Shop.

Major Benefits

Two major benefits are gained through examination of used lubricating oils. Maintenance costs are reduced. Oil savings are realized.

The Supply Center believes savings in maintenance costs are paramount. The average service period between overhauls, as stated before, has jumped from 700 hours to 2,000 hours. On the

basis of 700 engines working six hours a day, 260 days a year, with an average overhaul cost of \$150, the \$100,000 yearly saving is realized.

The Center has found that shop personnel, including top supervision, must be sold on the idea that laboratory oil data can be useful in their efforts to reduce overhaul maintenance costs. Detection of trouble before engine operation becomes noticeably abnormal and before the engine has suffered extensive damage is of great importance.

Oil testing should be an integral part of the maintenance program. A systematic procedure for taking samples and filing reports is needed in order to keep an operational and functional history of each engine. Oil analysis then becomes a tool, but not a substitute for regular attention by competent mechanics.

Daily Records

The Center's shop keeps track of motors through a daily, posted gasoline issuance. When this total reaches 50 gal, equivalent to approximately 50 hrs of operation, the vehicle is called in for service and a service card is sent to the oil analysis office where a record is maintained on each vehicle.

This record shows the date of motor installation, date of each servicing, number of hours of operation, amount of oil added between services, results of laboratory tests. Action taken at each servicing period is noted.

Oil samples normally are taken after each 150 hrs of operation, but in many instances a test is taken after 50 hrs to make sure that abnormal operation conditions have been controlled or corrected. When this oil sample is to be taken, the engine is warmed up to operating temperature and a sample is removed by suction from the bottom of the crankcase.

The sample is tagged with the vehicle number, date, amount of oil added since last servicing, and a note of significant repairs is forwarded to the industrial laboratory at Mare Island. The vehicle is then thoroughly inspected by an expert mechanic who submits

(Please Turn to Page 66)

Fleet's Lubrication Experiment

Doubles Diesel Engine Life

High-additive oil, plus tear-down schedule based on performance lengthens time between engine overhauls

AN interesting change is taking place in automotive lubrication. It indicates—if experience with a new type lubrication in one of our diesel-powered tractors can be accepted as a guide—that engine maintenance costs are about to decrease. In this period

of rising costs, this is, indeed, good news for management.

The cost we have in mind is not the cents-per-quart cost of the engine oil. It is the many-dollars cost of engine overhaul.

Tests being made currently in our vehicles show that, without

changes in operation or maintenance practices, we have about doubled the average operation period between engine overhauls. This not only represents 50 per cent reduction in major maintenance costs but, also, eliminates vehicle down-time and, consequently, means more pay loads.

Overhaul on Performance

While there are maintenance men who overhaul engines on a definite mileage schedule, others—as we—can't see the wisdom of tearing down an engine until it is justified by uneconomical performance. One of our yardsticks is oil consumption and conditions.

Watched carefully these factors—consumption and condition—tell a great deal about what goes on inside that engine block. We need this information to avoid road failures and to keep maintenance cost at a minimum.



This tractor went into the shop for its first overhaul at 275,000 miles and the engine was found to be clean

At 275,000-mile inspection, cylinder wear was .001 in., sleeve and connecting bearings were still serviceable



By Lloyd M. Fitzpatrick

Alpena Wholesale Grocers Co.
Alpena, Mich.

Oil contamination, for example, not only indicates excessive wear but, also, gives clues as to the nature and cause of wear. If, for instance, an engine's oil should contain any metallic particles, that is positive proof of metal-to-metal contact caused by poor lubrication.

As for consumption, the average fleet maintenance superintendent pulls in a truck for an overhaul when its oil consumption gets to be around 130 to 140 miles per quart. Drain periods run between 2,000 to 2,500 miles.

Fleets in our category, operating diesel-powered equipment, usually have their tractors come in for a major overhaul at from 100,000 to 150,000 miles. Cylinder wear at those mileages seems to run from .006 to .011-in. taper.

Recently, when one of our tractor-trailers pulled in for a major overhaul, it had traveled 275,000 miles without the oil pan having been once removed.

Being in service for around twice the normal mileage before an overhaul, we naturally were anxious to determine the condition of the engine. We were not too concerned, because performance was good. When the engine was torn down, we found the engine to be clean and in excellent condition, as shown in the accompanying photographs.

Cylinder wear at this point was but .001-in. taper, as compared with the average wear conditions stated above for about half this mileage. Sleeve bearings were returned to service because they exhibited much less than the safe wear tolerance of .010 in. The connecting rod bearings, showed little wear. They were not returned to service although we feel sure that fatigue tests would show that these bearings could be returned to service for approximately another 100,000 miles.

The engine, a Cummins NHB-600 diesel, 6-cyl, 200-hp unit, (Please Turn to Page 47)



Completed early in the summer, this answer to subzero temperature has already proved its value in eliminating costly loading delays

No More Shoceling

Subsurface Pipe Line Premelts Snow and Ice

Hot water-antifreeze solution forced through
underground network keeps loading area clear

RECENT construction in the plant loading area of the Hewitt Rubber Co., Buffalo, N. Y., is expected to result in substantial operating economies, while eliminating most of the hazards and costly delays caused by the heavy snowfalls of northern New York state.

Company officials have good reason to believe their new snow melting system of wrought iron coils embedded in the concrete pavement of the loading area is the most efficient and practical solution to the dual problem of snow removal and disposal. A hot water-antifreeze solution is circulated through the coils, warming the paved area and melting the snow as it falls.

Snow melting is not an innovation at the Hewitt plant. The Buffalo concern made one of the first industrial installations for melting snow and ice in 1944, when two runs of 1¼-in. wrought iron pipe were laid under one of the truck drive-

ways which was then being resurfaced.

On the many occasions during the past eight winters, when the rest of the plant area has been clogged with snow, the runs of wrought iron pipe in which exhaust steam is utilized have kept the 80 ft by 8 ft driveway completely free of ice and snow.

The new snow melting system, which will service the plant's entire loading area, incorporates the most recent advances in the design of modern snow-melting installations. Since quick drying, as well as complete melting, is an objective of the new system, pipes are spaced 18, instead of 32 in apart, as in the original installation.

An area 110 ft in depth and 71 ft wide is being serviced by the new snow melting system. The first section of the system was tried during the past year and was reported to have worked perfectly. •

Industry Items



The pilot of a patrolling Coast Guard helicopter saw this unusual sight recently as a full-house was scored at the large passenger piers along the Hudson River waterfront. From left to right: the Cunard liners *Media*, *Mauretania*, *Queen Elizabeth* and *Georgic*, the French liner *Liberte*, U. S. Line's *United States* and the Italian liner *Conte Biancamano*.

Lewis-Shepard, Watertown, Mass. announces their Master Line of materials handling power trucks is now represented by Mussels Canada, Ltd., in Montreal, Quebec.

The Champion Paper & Fibre Co., Hamilton, Ohio reports net income of \$2,170,312, equal to 93 cents a common share, for the second quarter of the company's current fiscal year, ending Sept. 30, 1952.

Reliance Electric & Engineering Co., Cleveland, Ohio, manufacturers of motors and motor drives, moved its Newark, N. J. sales office into newer and larger quarters at 535 High St., Newark.

General Electric's Lamp Division, Cleveland, Ohio, announces construction of new warehouse, shipping and office facilities at Glendale, L. I., N. Y. Rail shipping will be via Long Island Railroad lines adjacent to the property.

A sub-warehouse to serve General Electric lamp customers in the Washington-Baltimore-Richmond area will begin operations at Arbutus, Md., early in 1953.

United States Plywood Corp., New York, N. Y. has opened two new sales and distribution units in Syracuse, N. Y. and Phoenix, Ariz., making a total of 43 units covering the U. S. and Canada.

The Garret Corp., Los Angeles, Cal., announces re-election of all members of its board of directors at the annual meeting of stockholders.

Hyster Co., Portland, Ore. opened a new dealership in Long Island, N. Y., under management of Don Shaffer, formerly a Hyster district manager.

Slick Airways, consolidated the sales and traffic departments, the operations and maintenance departments, and the functions of the office of secretary and treasurer.

AGF-Brill Motors Co., Philadelphia, Pa., voted to recommend a plan of \$3,000,000 recapitalization to the company's stockholders for approval.

Machines Tools, Inc., Des Moines, Iowa, has been appointed exclusive dealer of Hyster equipment in a large part of Iowa by the Hyster Co.

Atlantic Steel Co., Atlanta, Ga., launched new warehouse with over 12,000 people attending open house and trade show. Costing in excess of \$500,000, the modern steel warehouse covers 64,400 sq. ft.

Consolidated Freightways, Inc., declared a regular quarterly dividend on common stock of 30 cents per share, an increase of 5 cents.

Nielsen Hydraulic Equipment, Inc., New York, N. Y., has been appointed authorized distributor for industrial tube fittings and tube working tools manufactured by Park Appliance Co., Cleveland, Ohio.

Swift and Co., construction of a new steel storage building at the soybean mill in Des Moines, Ia.

Abbott Laboratories, construction of a 300,000-sq ft warehouse, Chicago, Ill.

Materials Handling Equipment, Inc., Peoria, Ill., has been appointed exclusive dealer for Hyster equipment for most of Northern Illinois and part of Iowa. Clarence E. Houston, formerly a member of Hyster Co., is general manager and one of the new firm's owners.

Hamerslag Equipment Co., San Francisco, Cal., has moved to larger quarters to handle their expanding materials handling equipment business.

Industry Services, Inc., New Orleans, La., has been appointed distributor for Baker Industrial Trucks in the Delta States area.

Lever Brothers Co., New York, N. Y., has centered all of its research and development activities in a new laboratory and pilot plant at Edgewater, N. J.

DuPont Company, Wilmington, Del., announces construction early in 1953 of a \$10 million plant south of Circleville, Ohio, for manufacture of "Mylar," a new transparent film for electrical insulation.

The Pennsylvania Railroad will undertake a \$47,000,000 program of freight service improvements, including new freight yard, freight car repair shop, icing stations for perishable freight and salvage and scrap plant. The repair shop at Hollidaysburg, Pa. will use the most modern fabricating, storage and materials handling facilities.

Missouri Pacific Lines, St. Louis, Mo., will purchase 64 units of diesel power in 1953, at an estimated cost of \$9,812,000.

Royal Continental Box Co., acquired new four-acre site for 75,000-sq ft building, Chicago, Ill.

ACF-Brill Motors Co., Philadelphia, Pa., reported net profit of \$1,490,977 for the first nine months of 1952.

Karl A. Herman Co., Grand Rapids, Mich., appointed exclusive distributor for its line of power driven dock boards by the Leitelt Iron Works, Grand Rapids, Mich.



Trailmobile executives visualize modernized plant in miniature, a model of plant expansion program at its suburban Oakley factory, in Cincinnati, Ohio. Shown above, left to right, are: William A. Burns, president, S. E. Biggs, vice-president in charge of production, both of Trailmobile, Inc.; and Walter Hasenzahl, industrial engineer in charge of the program.

... Doubles Diesel Engine Life

(Continued from Page 45)

might not have been pulled off the road at this point, except that a copper injector tube started losing oil and made a trip to the shop necessary.

Lubricant Credited

We attribute this unusual engine performance, at least in part, to a new type of oil tested in this engine—a high-additive type having a low additive depletion rate. The lubricant was added to the engine after the truck had gone 100,000 miles since overhaul. The change was made without flushing or special cleanup. The new lubricant was added to a heavy-duty oil containing additives.

Oil Consumption

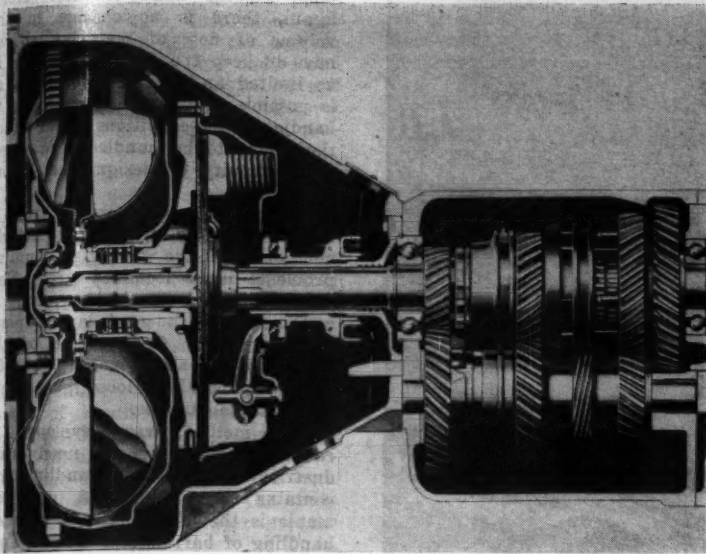
Initially, oil consumption increased. This increase was slight, and prevailed over 3,000 to 4,000 miles, at which point it started to improve. From there on, the improvement was marked up to a point of about 60 per cent less in consumption than the previous lubricant.

Every 10,000 miles thereafter, the lubricant condition was checked for contamination, metallic particles, and so on. Drain periods were extended also by about 60 per cent.

The engine was equipped with a lubrifine diesel pak, and a normal filter practice was followed. Fleet maintenance followed the generally accepted PM procedure.

This truck, and others in the fleet, traveled about 100,000 miles per year in over-the-road service in seven states, carrying a gross load of approximately 100,000 lb. Needless to say, we are continuing the experiment with enthusiasm and look forward to longer engine life and lower maintenance costs in the future. •

(Resume Reading on Page 45)



Cutaway view of new Dodge Truck-o-matic transmission with fluid drive pictured at the left, clutch in center and four-speed transmission at right.

New Dodge B-4 Series...

(Continued from Page 34)

Three New Engines

The new trucks meet approximately 98 per cent of all hauling needs, Dodge claims, with seven engines (three of them completely new) ranging from 100 gross hp in the ½-ton to 171 gross hp in the 4-ton models. Gross vehicle weights range from 4,250 to 40,000 lb, and gross combination weights range up to 60,000 lb.

Largest of the new engines is that which powers the 4-ton models. It has a displacement of 413 cu in., compression ratio of 6.5 to 1, and develops 171 hp at 3200 rpm and 343 lb-ft gross torque at 1500 rpm. It is equipped with twin carburetors, manifolds and exhaust systems. Largest engine in the previous B-3 Series developed 154 hp at 3000 rpm.

The new 2½-ton K and KA conventional models are available with a new engine with a displacement of 265 cu in., and compression ratio of 6.8 to 1. The new engine develops 135 hp at 3600 rpm and 226 lb-ft gross torque at 1600 rpm with twin carburetors, manifolds and exhaust systems. This engine develops 120 hp at 3600 rpm and 225 lb-ft gross torque at 1200 rpm with standard single carburetor to power the new 2½-ton J and JA models.

The third new engine is one of 260.6 cu in. displacement and 6.8 to 1 compression ratio and which powers the 1½-ton F, G and GA models and the 2-ton H and HA models.

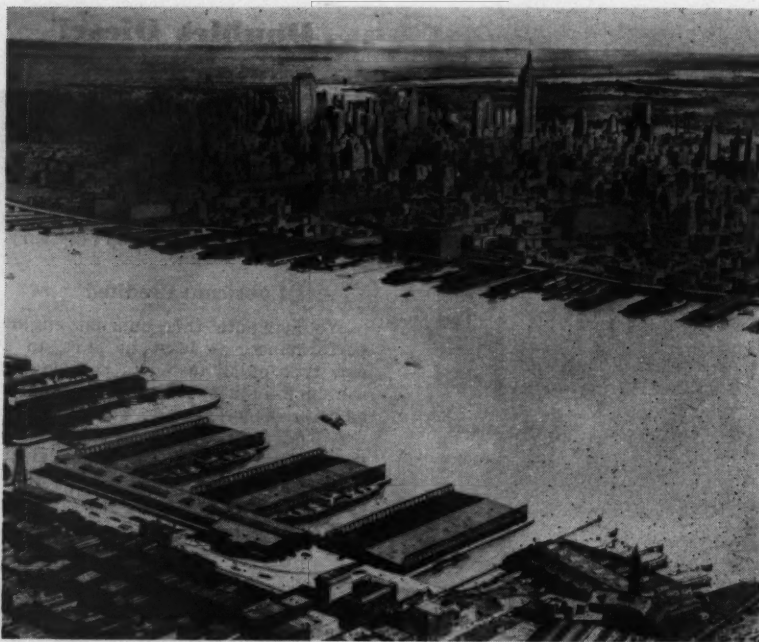
Improved Brakes

Dual-primary type rear brakes on the 1, 1½, 2, and 2½-ton models provide better braking action by insuring quick, safe stops with greatly reduced pedal pressure. This type brake has proved itself in severe service on heavy duty trucks. Additionally, improved braking and better balance between front and rear brakes is obtained on ¾ through 2½-ton models by use of straight bore brake cylinders on front and rear.

The propeller shaft center bearing mounting has been redesigned to permit more bearing flotation and so improve both bearing alignment and bearing life. •

(Resume Reading on Page 35)





Artist's conception of the \$22 million Hoboken, N. J., pier development planned by the New York Port of Authority. The new facilities would be able to handle about a million long tons of freight, almost double the present ton capacity. Plans call for construction and reconstruction of three piers. Work on the first pier would begin in about six months, and would be completed in four years at a cost of \$7.5 million. The second pier would be ready in eight years.

... Fork Truck Attachments

(Continued from Page 25)

strides, and has accomplished them in a very short period of time.

This struggle is by no means over; yet it bears investigation if we, as material handling enthusiasts, are to profit by such experience. One quick way of analyzing the tremendous strides made, is to say that 'wastes' have been eliminated. Wastes of effort; wastes of material; and, wastes of ideas. The waste of effort and material are very familiar to most of you.

Idea Waste

The waste of ideas may need a bit of explanation. A waste of an idea is a constructive suggestion which is cast aside. The deeply organized management system, today, wastes very few ideas which will help to lower the cost of changing the size, shape or composition of materials. Our material handling, transportation and packaging operations today, however, are wasting many ideas because we can not evaluate them properly. Up to this minute, we have been concerning ourselves with ideas that eliminate labor, as such. From this moment on, I sincerely hope we also concern ourselves with the effective use of our mechanized equipment.

For the sake of contrast, we will take the instance of an employee who is very busy all day long physically

handling material. His work is arranged so that he has to keep going in order to keep-up. He is a productive employee and represents our understanding of an effective utilization of labor. On the other hand, he may not be an efficient handler in the sense that many of his motions are unnecessary and he may be re-handling in order to get the material in the right position.

Motion Study

These items of inefficiency can sometimes be eliminated by motion study techniques. The contrast comes here, where the wasted effort and motion have been eliminated and we find the employee lazily coasting on the job. The flow of material he handles does not change in volume and he has to be in attendance. There is no other job at hand, or near-by, to which he can be assigned. In one sense we have made him more efficient but less effective.

The overlooked need for an assignment of additional work causes such situations to become quite prevalent when motion study techniques are the dominant factor in handling cost-reduction programs.

The same need for an assignment of other work is highly emphasized when a fork truck replaces the hand

labor or the hand trucker. Here, again, there is no change in the volume of flow of material, so we have to keep the fork truck busy in as limited an area of operations as is possible. The variety of things to handle and the conditions under which they have to be handled, challenge the ingenuity of design and layout engineers.

One method coming to the front is to have a variety of fork truck attachments to meet the variety of handling problems in a localized area. This keeps the fork truck busy, and in conjunction with good layout planning, allows a further use of the equipment whenever motion and efficiency studies shake loose more available equipment time.

This method was developed in recent years to meet the need in industries where a single handling unit contains the product. A good example is the oil industry with their handling of barrels and drums. Fork truck attachments provided a means of handling singly, in multiple lots, and in re-positioning dumping, etc.

We have tried to stress the real need for fork truck attachments as being the need to keep fork trucks continuously busy at fork truck work. The attachment fixture is a key item for doing just that.

The Available

Your interest in fork truck attachments has surely carried you to an understanding of the various types now on the market. There have been several good articles in the trade magazines, lately, with pictures and stories of the large variety of such units available. I am not going to try and enumerate them, nor show you pictures of the great variety of jobs they are doing. When we say available, we mean the available collection or the available status of fork truck attachments.

Today, we have at our command many, many devices which have been engineered by the manufacturers of material handling equipment for the jobs they could see as they came in and looked at our operation. It was very evident to them that we users could materially benefit from certain grabs; certain lifters; and certain positioners. So, they engineered a unit for the specific purpose, as they saw it. We users certainly have no complaint with their offerings. The fixtures which can be attached to fork trucks, and which can literally turn handsprings, are waiting for us in the open market, right now.

Attachment Versatility

For example, there are attachments that will operate like your hands in picking up a package, turn it over and place it down again in entirely different position. There are attachments that will operate better than your hands because there is more muscle behind them. They will com-

press or squeeze against a package, or even against a multiple lot of packages, and lift them, turn them over if necessary, and place the unit in any desired position. We understand there are even attachments which will pick up a multiple group of parts or packages and discharge them in partial lots.

All of this gadgeting has been aided by hydraulic action transferred from the truck pumping system. Some of the fixtures are automatic in a mechanical sense, either with or without the aid of levers, catches or other tripping mechanisms. Some are supplemented by single hydraulic lines; some by double lines of oil-flow and pressure. All are the result of designing ingenuity which the manufacturers of handling equipment have come up with. They are practical and are of untold value as we move farther and farther away from high costs of handling and into the areas of lower costs and greater productivity.

The Missing

When we consider the large quantity of fixtures and gadgets that are now available, we have quite a problem to determine a missing link. We will go on a long limb and say that two things are missing in a great majority of instances:

1. The coordination and combination of mechanical and hydraulic devices.

2. The opportunity to exchange from one fixture to another, in a matter of seconds instead of minutes. Both of these developments are just around the corner, as the challenge to designing engineers has been made and is being researched. One of these days these features will be waiting for us to use and if we are not careful, we will not be ready to use them because we have not looked ahead far enough; have not studied our job closely enough, and do not grasp the potential of fork truck attachments. So, in fact, there are three missing links, the two we gave you before, and us.

Our majority of materials handling problems are concerned with materials on the move. A fork truck is capable of moving, lifting, positioning, and repositioning. The unlimited opportunity to replace our handling with fork truck handling might even go so far that a fork truck could be a conveyor and a conveyor attendant, in itself.

That is, pick-up, move, reposition, and place. The multiple tonnage capacity of a tow-tractor and trailers for the movement cycle is already overcome by the present draw-bar capacity of fork truck equipment. In other words, there is no reason to believe that a fork truck, with quick attaching and detaching of fixtures, could not be the one and the only one, industrial power truck type required on the premises. •

(Resume Reading on Page 26)



Fork lift truck speeds merchandise onto 16,000 lb capacity elevator.

Merchandiser Handles More With New Oversize Elevator

Milwaukee department store increases warehouse movement with MH system

BY installing a single oversize Otis Pow-R-Truck elevator in the newest wing of its central warehouse and customer service station, Ed Schuster & Co., Milwaukee department store, handles more merchandise more economically than it could have with the two smaller freight elevators it had originally planned to install.

Pallet and skid-loaded merchandise in this eight-story warehouse building is moved horizontally on Clark fork-lift trucks (and on hand-powered pallet jacks) and vertically on the oversize elevator. The 17x22.2-ft platform of this 10,000-lb capacity elevator is so wide that as many as five and six pallets can be deposited side by side without one load getting in the way of another.

Loads are carried between the nine floor landings at speeds up to 300 fpm. The car has bi-parting power doors at both front and rear ends of its platform. On the main floor, the car's rear door opens di-

rectly onto the loading dock.

Because of its 16,000-lb static load capacity, lift trucks can ride safely onto the elevator with their loads and, when necessary, can ride with the elevator from floor to floor.

The car's method of operation—collective control with an optional attendant feature—permits it to be operated either with or without an attendant. When operating with collective control, the car automatically responds to push-button landing calls. When attendant-operated, calls are registered on an annunciator in the car.

Because of its size, capacity and speed of operation, this oversize elevator has maintained a smooth flow of merchandise into and out of the warehouse—even at the height of the Christmas rush. In addition, extra aisle and storage space was made available on each floor by laying flooring over the unused second hoistway. •

Circle 38 on Service Card, Page 36

Debatable Deductions . . .

(Continued from Page 33)

Unlawful Expenses

Courts approve ordinary and necessary expenses in conduct of a business, but unusual or unnecessary expenses are not allowable deductions.

For example, in Case No. 6, 15 T. C. 517., testimony showed facts as follows: A manufacturer, handler and distributor of merchandise listed as business expenses certain expenses incurred when his daughter was married.

About 90 of the 320 guests who attended the ceremony were business customers or potential customers whose names were selected by the father. This figure included wives and other members of the families who attended. The hotel bill for the dinner and reception was \$4,327.47, the liquor bill amounted to \$1,468.50, and the bill for the orchestra was \$450. The bills were paid by check of the man's corporations and were entered on the books as traveling and entertainment.

The commissioner disallowed these various deductions. In subsequent litigation, the testimony showed that the wedding invitations made no reference to the father's business.

Warehouse Receipts

A reader asked this question: "What is the law on capital gains on warehouse receipts? When can a taxpayer pay only 50 per cent tax on his profits?"

The uncertainty of tax controversies involving warehouse receipts is well illustrated by the outcome of Case No. 7, 16 T. C. No. 28. In this case the commissioner determined that the deficiencies in a taxpayer's income tax was \$10,152.56. The controversy involved the purchase and sale of warehouse receipts by a taxpayer. The testimony showed facts as follows: Doe purchased and owned warehouse receipts in large amounts. Many of these receipts were obtained through contracts with manufacturers who manufactured and sold to Doe certain quantities of merchandise.

He sold certain of these warehouse receipts and earned a nice and substantial profit. When filing his Federal income tax return he claimed that since he had held the warehouse receipts more than six months his profits were earned on the long term capital gain basis whereby he was permitted by law to pay income tax on only 50 per cent of his net income. The commissioner disagreed with this contention, holding that the man must pay tax on the full amount of his profits.

The reason the commissioner held that Doe was deficient in his payment of taxes was that the commission be-

lieves that the profits he earned on sale of warehouse receipts was ordinary income and not long term capital gains on capital assets.

The Federal Tax Court refused to agree with the commission and held that Doe was not deficient in his income tax payments because the warehouse receipts are capital assets.

Law of Futures

Considerable discussion has arisen from time to time over the legal question: "How much income tax must a purchaser of futures pay?"

It is well known that many transactions involve futures contracts executed on exchanges governed by rules which are substantially in accord. In many cases, such contracts culminate in the delivery of the actual commodity, but for the most part persons who sell merchandise on such exchanges subsequently buy an equal quantity of the same commodity for delivery in the same month it is sold, making their offsetting purchases before the delivery month is reached.

Their sales offset their previous purchases, and the need for actual delivery of the merchandise is avoided by accounting methods employed in exchange clearing houses, and banks to avoid the needless use of actual money in daily settlements.

Transactions in commodity futures are commonly spoken of as "purchases and sales of a specific commodity." However, the purchasers actually acquire rights to the commodity or merchandise rather than the commodity or merchandise itself.

These rights are intangible property which may appreciate or depreciate in value. They are capital assets held by the taxpayer and unless they are hedges they cannot be regarded as stock in trade or other property of a kind which would properly be included in the inventories of the taxpayer, if the same is on hand at the close of the taxable year. Neither are they property held by the taxpayer primarily for sale to customers in the ordinary course of his trade or business.

Therefore purchasers who deal in futures ordinarily need pay income tax on only 50 per cent of their net profits, and they cannot deduct more than 50 per cent of the losses.

Traveling Expenses

Considerable discussion has arisen from time to time over the legal question: "When and under what circumstances are traveling expenses lawfully deductible by one who works for an employer, and one who operates his own business?"

First, I want to emphatically point out that traveling expenses is a very uncertain deductible item. Under certain well defined circumstances "traveling expenses" may be lawfully deducted by the taxpayer. On the other hand, such expenses are not legally deductible under many other circumstances. Generally speaking, when determining whether traveling expenses are legally deductible, the amount of the expense in proportion to the taxpayer's gross income is important evidence.

See Case No. 8, 16 T. C. No. 42. This case involved traveling, entertainment, hotel, meal and like expenses of a man who resided and maintained a home in Doetown, Mass. The testimony showed that he also



On-the-job tests show a new application of the White 3000 with 3 1/4 yard cement mixer affords an excellent weight distribution advantage and permits

an additional half yard payload of mix within highway weight limitations. The White Model 3020 single axle unit, 109 1/4-in wheelbase is shown here.

at times acted as production manager. He has lived in Doetown all of his life and was employed by a local manufacturing company. He had no financial interest in the company.

The taxpayer decided that he could increase his annual income by selling, distributing and handling products manufactured by his employer. Therefore, he formed the John Doe Sales Co. in New York, N. Y., which he operated as a sole owner. This company's principal business consisted of selling plastic articles to the jobbing trade. He maintained a mailing address in New York where he picked up mail pertaining to this business. He had no employees at this address and customers did not come there to transact business. It was his practice to call on prospects. In his income tax return for the year he reported the results of the John Doe Sales Co. operations at a net profit of \$8,340.90.

In Schedule C, attached to his return, petitioner itemized the expenses totaling \$7,020.54.

Adverse Decision

The commissioner decided that petitioner was not entitled to a deduction of \$5,129.73, an item listed as traveling. The commissioner sued to recover the tax deficiency.

The reason as stated by Doe that he listed these expenses as lawful deductions is that his home was in Doetown and these expenses were made necessary in conduct of the business of the John Doe Sales Co., which he owned, and also because he maintained an office in New York as well as in Doetown.

Hence, he claimed these deductions were lawful under Section 23 (a) (1) (A) of the Internal Revenue Code for expenditures made in connection with his business trips to New York. The commissioner decided that petitioner was entitled to deduct \$806.40 as travelling expenses but that all other items in this \$5,063.32 amount were not lawfully deductible and that he must pay the government deficiency, plus interest and penalties on this amount of \$5,063.32 less the lawful allowable \$806.40 for expenses.

In seeking to disallow all of \$5,063.32 above \$806.40, the commissioner argued that "home" was in New York and his New York expenses cannot be regarded as having been incurred while away from home.

The court held the commissioner was wrong in this assumption because petitioner maintained a home for himself and wife in Doetown, and particularly because he was a registered voter there. The court held that he was entitled to deductions of \$806.40 for transportation between Doetown and New York; \$1,631.65 hotel and meals while in New York, \$207.61 postage, etc.; \$1,517.85 entertainment expenses; and \$150.00 for Christmas gifts to his customers.*

(Resume Reading on Page 34)

**Man-handling
Lehigh's daily
requirement of 120
bales was a full day
job for two men.**



Fork Truck Slashes Bale Handling Time 87 Per Cent

LEHIGH Spinning Co.'s Allentown, Pa., plant has slashed the time required to transport imported jute in bales by 87 per cent. Using a Mercury Yak truck with a special bale-handling attachment, transferring the mill's daily production requirement of 120 bales from warehouse to operating floor now requires only two hours. This same number of bales previously required the services of two men for an entire day.

This company receives jute, imported from Pakistan and India,

in 400-lb bales and stores the bales in a warehouse until the plant can process the raw material. The jute is picked up in unit loads of four bales and the Mercury truck transports the bales 125 ft over a 20 per cent grade to the floor of the mill where bales are broken up.

The lift truck's versatility has brought tremendous saving in this phase of material handling operations. During the remaining six hours in every shift, the truck is used for other important jobs.*



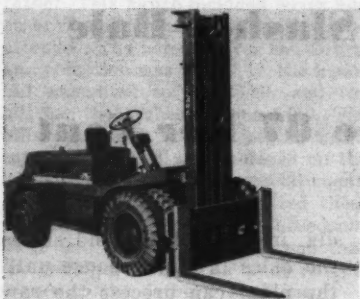
**Now, a Mercury
Yak truck does the
same job in two
hours, picking up
four 400-lb bales
at one time.**

New Products

(Continued from Page 41)

10,000-lb Capacity Truck

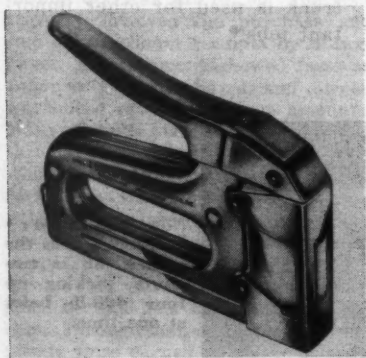
This sturdy, gas-powered, pneumatic-tired Clark fork truck has a 10,000-lb capacity at 24 in. load center and is designed for heavy-duty high-tiering under difficult outdoor conditions. The Yardlift-100 is powered by a Continental engine producing 55 brake hp at 2,000 rpm and a traveling speed of 17.8 mph. A 133 in. turning radius allows easy operation even in narrow aisles.



Circle 30 on Service Card, Page 36

Gun Tacker

Arrow Fastener Co. announces the new T-50 Gun Tacker that shoots heavier, longer staples up to 9/16 in. A patented non-clogging mechanism prevents jamming or clogging of staples and

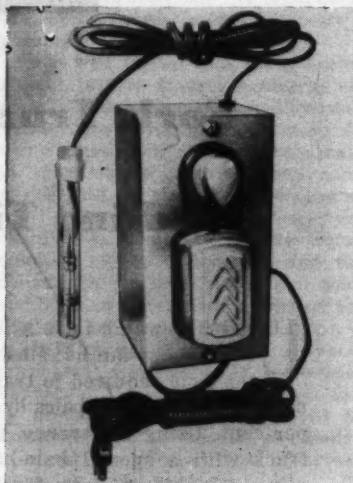


permits only one staple at a time to be ejected from the staple track. The tacker can be easily dismantled to remove dirt, dust, or grit for smooth efficient operation.

Circle 31 on Service Card, Page 36

Thermostat Alarm

To save perishables and equipment, Mack Electric Devices Inc. is marketing a self-contained automatic alarm system that permits 24-hr maintenance of a constant, safe temperature range in refrigerators, freezers, sterilizers, brooders, incubators, food processing equipment, cargo carriers, storage bins, fur vaults, and nurseries. The Mack Thermo-Alarm instantly sounds a warning buzzer when unsafe temperature limits are reached.



Circle 32 on Service Card, Page 36

High-Lift Pallet Truck

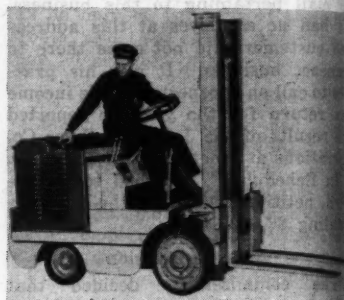
A new 4,000-lb capacity high lift pallet truck has been added to the Yale Worksaver line of motorized hand trucks. Designed to transport and stack skid bins, or single-face pallets, the new truck will stack at heights up to 120 in. Pallet forks are used instead of conventional forks for minimum overall truck length and lowered fork height that will accommodate single-face pallets.



Circle 33 on Service Card, Page 36

Diesel-Electric Model

Ready-Power Co. announces its new model "N" as the latest in the company's growing line of diesel-electric models available for electric industrial trucks in the popular 4,000-lb fork and up to 10,000-lb platform sizes. Designed to fit sit-down type forklifts without need for alterations, the unit is complete with fuel tank and starting battery.



Circle 34 on Service Card, Page 36

All-Steel Pallet Guard

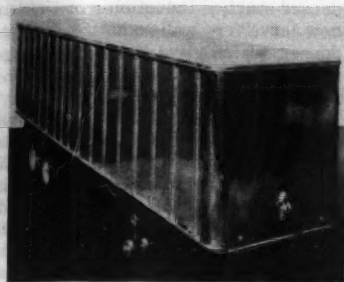
A new materials handling safety device called the Ran-Guard Corner Steel Pallet Guard, is now manufactured by Randolph Metal Products Co. Welded steel gussets slip under the load (either on the floor or beneath pallet) and prevent the bright yellow and black guard from falling. Originally developed by Randolph to protect its own material against damage by trucks and lifts, the device is adaptable to all types of storage



Circle 35 on Service Card, Page 36

Light-weight Van

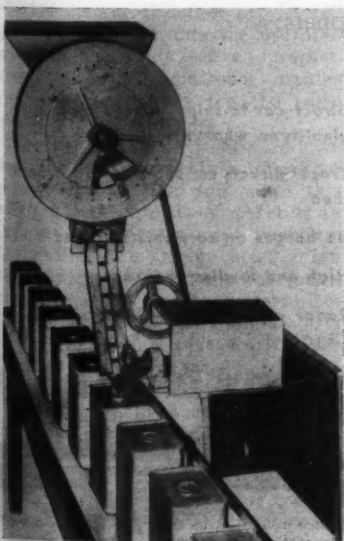
Fruehauf Trailer Co. announces the Car-A-Van, a new edition of the popular exposed-post aluminum van trailer. It is designed for operators who require a light-weight aluminum unit that can handle heavy-duty hauls ordinarily assigned to heavier steel trailers. Its front corners have a 10-in. radius for closer coupling and for greater trailer length giving increased payloads.



Circle 36 on Service Card, Page 36

Lid Sealing Machine

Application of metal seals, inner seals and friction lids to tin and fibre cans has heretofore been performed either manually or semi-automatically. Tite-Cap Machine Co. has introduced their Fully Automatic Lid Sealing Machine, which applies seals to any position on the can via a rotating magnetic head, timed with the continuous movement of the can on a chain conveyor.



Circle 37 on Service Card Page 36

In addition to its jockeying and standard duties, the Clark fork truck has been fitted with a small converted lime spreader. The spreader has two pneumatic wheels which fit on the forks. It is used to spread salt over the parking area in freezing weather.



Fork Truck Serves As Fleet Garage Jockey

Lift truck with home-fashioned attachment performs as standard unit as well as handy vehicle spotter

A STANDARD fork truck which doubles as a jockey for automobiles and trucks has solved spotting and parking problems at the main fleet garage of Union Electric Co., St. Louis, Mo.

The transformation from orthodox lift truck to Shop Mule is made in a matter of seconds by means of a homemade attachment, without removing the forks.

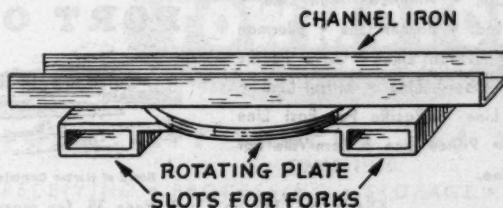
The attachment, used for lifting cars by the front end, consists of a channel member which rotates on a round plate, to which has been welded angle iron slots for fork entry. The entire unit weighs only 30 lb.

Slipped on the forks, the channel is aligned with the bottom side of the front bumper and the lift is raised, which hoists the front wheels off the

ground. With the bumper resting in the channel, the vehicle can be towed without the lift operator leaving his seat.

Parking facilities and the garage at Union occupy almost three blocks, with considerable distance between parking areas. Vehicles are parked in numbered slots, according to numerals placed on the front of each car and truck. Those vehicles designated for shop service are spotted on a map at the foreman's desk, and pick-up is made via the fork truck.

This system allows the man to ride both ways, which saves time, since the distance is often as much as a half mile. The unit is also used in parking or reparking misaligned cars and trucks, easing traffic and handling in the limited space parking area. •



Rotating on a fifth wheel, the channel is centered under the front bumper for lifting operations. Angle iron slots provide snug fork entry.

... Small Electric Hoists

(Continued from Page 27)

Two-Speed Control

Available on some hoists today is a two-speed control. This is a type of variable speed control wherein two speeds are available; a high speed and a low speed, the latter being either one-half, one-third, or one-fourth of the top speed. The conventional variable speed a-c hoist employs a slip ring motor and speed is controlled by inserting resistance in the secondary or armature circuit. In the two-speed system the motor and control are designed so you can change the number of poles in the motor, thus changing its speed, and the hoisting speed.

As the name indicates, only two speeds are available. In the majority of cases, two are sufficient. The lower speed is used only to spot a load accurately, and is needed only in the last two or three inches before the load arrives at its destination. The remainder of the distance can be traversed at full rated speed. The change from high speed to low speed can be accomplished at any position of the hook by simply pressing a pushbutton or moving a button part way out or in.

With two-speed control, the operator gets the exact two speeds the hoist was designed for regardless of the hook load, whereas the speed obtained using the conventional a-c variable speed control will vary on a particular point of control with a change in load. Two-speed control will give a ratio of low to high speed as low as one to five, whereas it is impractical to obtain less than 40 or 50 per cent of the higher speed with the slip-ring control if there is a wide variation in load. Maintenance costs will be lower with two-speed control because there are no slip rings, brushes or resistors to maintain.

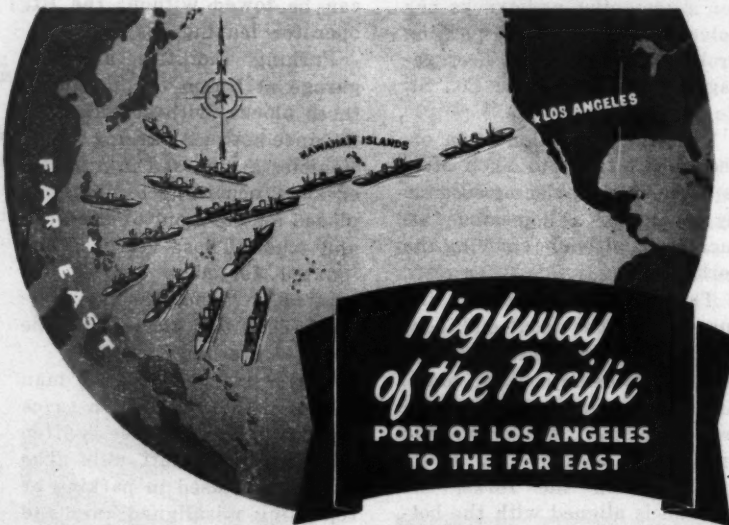
Oil Seals

Now consider the oil seals and gaskets in the modern hoist. They are much more positive now than a few years ago, so much so that you seldom hear of an oil leak. The trend is away from the oil slinger used before the modern seal. This improvement is no luxury. It is a definite must in industries such as baking, textiles, and laundering where a drop of oil would

ruin the product being handled. Improved seals and gaskets also give assurance that gears are not suffering from lack of lubrication even through long periods when the unit is not serviced.

The hoist of a few years ago was made for operation on poly-phase current only. Today you can obtain reliable hoists for operation on single phase current, also. This change was made possible through improvements made in single-phase motors. The first single-phase motors used lacked high starting torque characteristics and the ability to reverse quickly and frequently. However, split-phase, condenser-start, induction-run motors now serve very well on hoists. The condenser, which gives the motor its high starting torque, is made compact and reliable.

Fast, frequent reversals are made possible through improvement in the centrifugal starting switch mechanism. They operate fast and close in response to a small change in speed, an essential characteristic in the proper action of the hoist limit switch. There are today several reverse switches on the market that make it impossible to energize the running winding of a motor until the stop switch closes, setting up the proper circuits to reverse the motor.



Steamship Lines Serving Los Angeles Harbor— Far East World Trade

American-Hawaiian S.S. Co. • American Mail Line •
American President Lines Ltd. • Barber Line • Ellerman
& Bucknall Assoc. Lines • Ivaran Line • Java Pacific
Lines • Klavaness Line • Maersk Line • Mitsui Line •
Osk-Shinnihon New York Line • Pacific Far East Line
• Pacific Orient Express • Prince Line • Fern-Ville Far
East Line • Waterman Line.

Consign your trans-Pacific shipments via your favorite transportation route . . . by rail, truck or air. More freight lines serve the Port of Los Angeles. There are many other advantages for shippers:

- ★ Direct car-to-ship delivery over marginal-type wharves
- ★ Truck direct to shipside or transit shed
- ★ No barges or carfloats required
- ★ High and lowline trackage
- ★ Radar and radio-telephone assistance

PORT OF LOS ANGELES



Board of Harbor Commissioners • City of Los Angeles, City Hall, Los Angeles 12, Calif.

Circle No. 112 on Card, Page 35, for more information

Still another improvement in today's hoists is their quiet operation. Today's design of gears and improved methods of manufacture have brought this about.

Less Weight Per Output

Reduction in weight has been made possible through the use of light-weight and high-strength materials. Aluminum is used a great deal in hoists today. Gears and shafts are made of alloy steels that are heat-treated, thus permitting the use of smaller gears for the same load. Modern gear tooth design permits use of pinions having as few as five or six teeth compared to the 12 that was considered minimum a few years ago.

The electrical engineer has also contributed to development of smaller hoists by designing smaller motors and controls. Today you can get a 2 hp magnetic contactor measuring only 5 1/2 in. by 4 3/16 in. by 2 1/2 in. (67 cu in.) and weighing only 3 lb. Compare this with the 2 hp controller of a few years ago. It measured 6 1/2 in. by 6 3/16 in. by 3 1/4 in. (133 cu in.) and weighed 5 lb. Similar improvement has been made in rope-operated drum controllers, also.

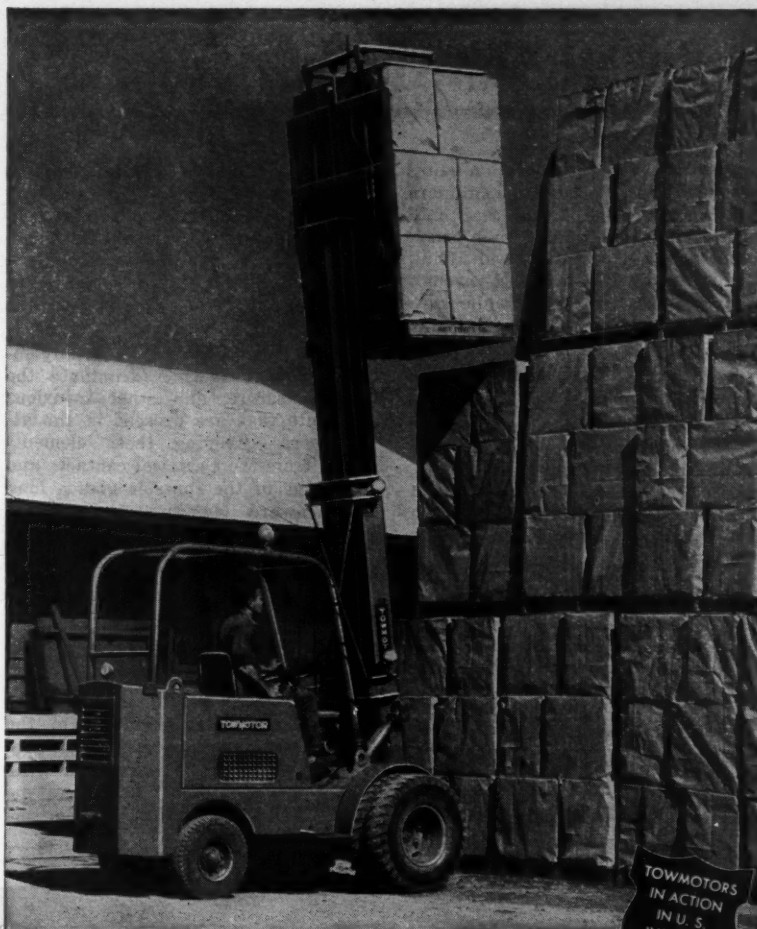
Use of anti-friction bearings throughout the hoist has increased its efficiency, and in turn has reduced its power requirements. Less power means smaller motors and controls.

Electrified Chain

The electrified chain hoist has made a comeback recently. The chain as a lifting medium has made possible the building of small hoists. A chain hoist has a small sprocket to wind up the chain, whereas a wire-rope hoist must have a drum large in comparison to the chain sprocket. The wire-rope drum must be large enough to hold the rope for the entire lift, whereas the sprocket does not "store" the chain. This permits the use of a small compact unit for a sprocket. Also, the small diameter creates greater lifting power for the same torque.

However, the chain hoist does have its limitations. The chain hoist cannot be subjected to side pull, since this will feed chain into the sprocket at an angle and is apt to cause jamming. The chain of a chain hoist often breaks without warning, whereas a worn wire rope can be detected before its failure. There are chain hoists on the market now that use a roller chain as a lifting medium, while others use a coil-link chain whose links are made from round rod. The roller-type chain can flex in only one plane while the coil-link chain can flex in all directions.

When deciding whether or not to use a chain hoist, you should consider whether the idle chain hanging from the hoist when the hook is rising will (Please Turn Page)



Stacking a stabilized load of weather-protected cans at United Can & Glass Co., Hayward, Calif.

Use your air rights...

on pier, in plant, outside or warehouse-wide... let Towmotor stack space-eating loads, up where you've storage capacity to spare. Speeding the handling of *all* materials, Towmotor saves its cost in a matter of months—then *you* profit by that big earning power throughout many busy years. You'll see the proof, right from the start, in stepped-up output per man-hour. Chart your course for maximum production with the help of a copy of "Man-Hour Thieves." Write for yours *now* and name of your nearest Towmotor Representative. Towmotor Corporation, Div. 1901, 1226 E. 152nd St., Cleveland 10, Ohio.



FORK LIFT TRUCKS and TRACTORS

SINCE 1919

RECEIVING • PROCESSING • STORAGE • DISTRIBUTION

Circle No. 113 on Card, Page 35, for more information

... Small Electric Hoists

(Continued from Preceding Page)

be a detriment to the operation being performed. There are chain containers available for some hoists that help under certain conditions. Chain hoists cannot be used for high speed lifting since the chain will not feed through the sprocket satisfactorily while running at high speed.

Weight Savings

To give an idea of the weight savings made in hoists, we might point out that older wire rope hoists having 20-ft ton output weighed 265 lb, whereas today's 20-ft ton output hoist weighs only 200 lb. The modern chain hoist having 20-ft ton output weighs only 100 lb.

To the user, reductions in weight and dimensions mean: Lower freight charges to deliver it to your plant; easier movement along a rail or from one location to another; and smaller clearance requirements.

Lower Maintenance

One improved device from the maintenance standpoint, is the pawl of the pawl-and-ratchet load brake. To-

day you will find several builders using various types of one-way clutches. These clutches are in continuous contact with the ratchet member of the load brake and have no back play. This feature eliminates pounding to which the pawl was subject.

Most hoists today have totally-enclosed controls, which eliminate the dust, moisture, and other injurious elements that are present in the atmosphere. Keeping these elements away from the electrical contacts and workings of the controls goes a long way toward lowering the required maintenance.

Another item under the heading of lower maintenance costs is the type chain used in today's chain hoists. It is a harder, tougher material, is harder to damage, and fits the chain sprocket more accurately.

The counterpart to the chain of the chain hoist is the cable of the cable hoist. Available today is a preformed cable that has reduced wear under normal usage. It reduces the internal flexing of the wires in the

cable as it goes over sheaves and drums.

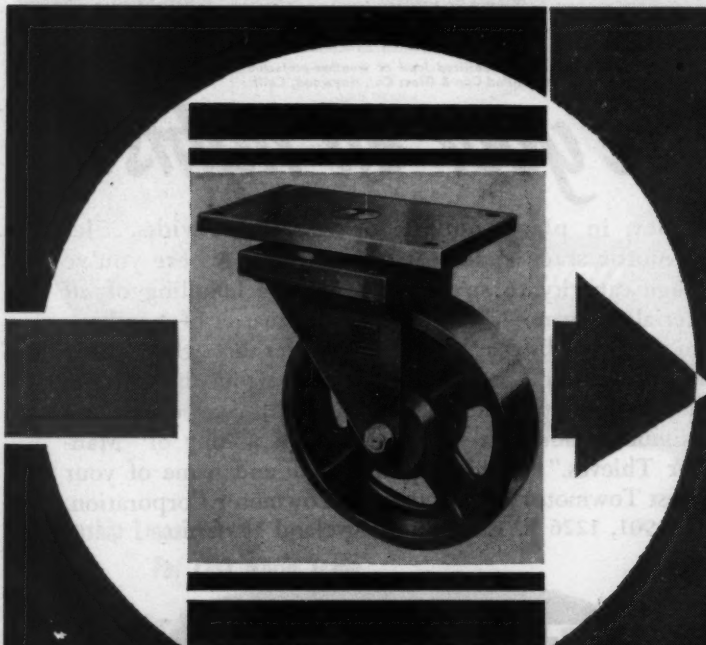
Magnetic Control

The use of the magnetic control has reduced the burning of contacts. With the magnetic control, the contacts are either all the way closed or all the way open and are not subject to the burning and pitting sometimes encountered in manual control. The use of alternating current in preference to direct current has reduced burning, also. It is harder to sustain an arc with a-c than with d-c. Better insulating materials—largely non-carbonizing—in controls, reduce the possibility of flashover between opposite poles.

More liberal use of anti-friction bearings keeps equipment in alignment longer than the old bronze bushings do. Sealed ball bearings eliminate foreign matter, the cause of the major portion of ball bearing failures.

Safety Factors

A more recent change along the safety line is the addition of a lowering limit. This prevents unwinding all the cable from the drum and rewinding it backwards with its resultant complications. I am thinking here of the cable hoist. Chain hoists have always used them. They were



*Write
for Free Darnell Manual*

**Get More
Work Done
by Installing
Darnell
Casters
Free Manual**

DARNELL CORP., LTD.
DOWNEY, (Los Angeles County) CALIF.

60 Walker Street, New York 13, N. Y.
36 North Clinton, Chicago 6, Illinois

Circle No. 114 on Card, Page 35 for more information

DISTRIBUTION DILEMMAS...



and
how
to
solve
them!

Snowed under? Then call CF for: **POOL CAR DISTRIBUTION, WAREHOUSING, LOCAL CARTAGE and MOTOR FREIGHT** services at 53 important Western distribution points:

Baker, Ore.	Eugene, Ore.	Klamath Falls, Ore.	Pocatello, Idaho	Spokane, Wash.
Bend, Ore.	Fargo, N. D.	La Grande, Ore.	Portland, Ore.	Sunnyside, Wash.
Billings, Mont.	Glenview, Mont.	Lewiston, Idaho	Redmond, Ore.	Tacoma, Wash.
Bismarck, N. D.	Grants Pass, Ore.	Lewistown, Mont.	Rice Lake, Wis.	The Dalles, Ore.
Boise, Idaho	Great Falls, Mont.	Medford, Ore.	Roseburg, Ore.	Toppenish, Wash.
Bozeman, Mont.	Helena, Mont.	Miles City, Mont.	Sacramento, Cal.	Twin Falls, Idaho
Burley, Idaho	Hermiston, Ore.	Missoula, Mont.	Salem, Ore.	Walla Walla, Wash.
Butte, Mont.	Hood River, Ore.	Nampa, Idaho	Salt Lake City, Utah	Wenatchee, Wash.
Coos Bay, Ore.	Idaho Falls, Idaho	Oakland, Cal.	San Francisco, Cal.	Yakima, Wash.
Ellensburg, Wash.	Kalispell, Mont.	Ontario, Ore.	Seattle, Wash.	
Ephrata, Wash.	Kennewick, Wash.	Pendleton, Ore.	Shelby, Mont.	

Motor freight coverage of hundreds of cities and towns from the Great Lakes to the Pacific Coast.



CONSOLIDATED FREIGHTWAYS

GENERAL OFFICES: PORTLAND 8, OREGON

Electric Protection Services FIRE • BURGLARY • HOLDUP

**Aero Automatic Fire Detection
and Alarm Service**

**Sprinkler Supervisory
and Waterflow Alarm Service**

**Watchman's Supervisory and
Manual Fire Alarm Service**

**Industrial Process and Heating
System Supervisory Service**

**Burglar Alarm and
Holdup Alarm Services**

AMERICAN DISTRICT TELEGRAPH CO.
155 SIXTH AVENUE NEW YORK 13, N. Y.
Central Stations in All Principal Cities

ADT

Circle No. 116 on Card, Page 35, for more information

relatively simple to apply to chain hoists, but on cable hoists it usually meant considerable additional expense and they were used only when necessary. This change is so new that it has not had the test of time. Therefore, we cannot say it will be permanent, but as of now its use is on the increase.

Another safety item available, but not so widely used, is the safety latch on the load hooks. These devices prevent the load sling from slipping from the hook.

Functional color has found use on hoists today. A color that makes them plainly visible, especially traveling hoists, adds to the safety.

Using the pushbutton in magnetic controls, there is a hazard that does not exist with rope control; the operator is holding a charged mechanism in his hand. Pushbuttons are well built and insulated, but accidents can and do happen. To overcome this hazard two devices are in general use today: A grounded pushbutton case, and lower pushbutton voltage. With the metal case of the pushbutton electrically connected to the hoist frame, which in turn is grounded through its runway or support; there is no possibility of a voltage building up that might send current through an operator's body.

Lower Voltage

Using a lower pushbutton voltage than line voltage is, reduces the possibility of a current going through the operator's body in sufficient quantity to cause injury. By using a separate-winding type of transformer to supply control current, there is the added safety of being completely insulated from the power source.

General use today is the enclosed bottom block sheave. This enclosure prevents the cable from getting off the sheave and also gives protection to the operator who must handle this block.

Another big step taken by the hoist industry in the last few years to make their equipment more reliable is the adopting of a type of construction that carries all the load on steel. In the past, cast iron was used to a large extent. Cast iron fails quite readily under tension, especially when subjected to shock. This failure often comes without warning. In steel you have a material that is much stronger in tension and is resilient enough to absorb shocks.

Changes in weight, usefulness, maintenance costs and safety are improvements in details only. The basic mechanism that makes a gear reduce a hoist is the load brake. This is still used the same as it was a good many years ago. The worm gear hoist does not use it, but neither do you find the worm gear hoist taking a prominent place in hoist design. •

(Resume Reading on Page 28)



Well Stacked!

Let our rack specialists lay out your new installation for maximum efficiency or study your present operation for possible improvements.

PROPER STACKING OF GOODS SAVES SPACE AND LABOR

E.M.I. engineers, fabricates and installs complete rack systems. Our designs offer the greatest in strength and safety, incorporating our square welded steel tubing and simplified assembly methods.

- PALLET RACKS
- PORTABLE STOCK RACKS
- COIL RACKS
- SPECIAL RACKS
FOR ALL APPLICATIONS

Write for our catalog

EQUIPMENT MFG. INC.

21577 Hoover Road, Detroit 8, Michigan

Circle No. 117 on Card, Page 35, for more information

Washington DA

(Continued from Page 15)

maybe by 25 per cent. But building of stores, garages, repair shops and other commercial types will be up by 25 per cent. Warehouse and loft construction is figured to increase by 20 per cent—for a total of \$600,000,000 worth. Another \$3 billion will go into highway work, a 10 per cent increase. Railroads indicate that they will spend about \$450,000,000 for new construction, up about 7 per cent from 1952.

Manpower Shortage

Threats of labor shortages are now reaching down into many of the fields of distribution. National employment in November hit a

new high for the month with government statistics showing 62,230,000 workers on the job with about 1,420,000 listed as jobless. A majority of these are either unemployable or are in the process of changing jobs.

This low level of available manpower is hitting the distribution industry hardest in the transportation segment. Shortages of drivers are causing headaches for the highway carriers and make up one of their biggest problems. Figures from DTA indicated at least 10,000 railroad job openings in November. There were many vacancies for mechanics and dockhands.

Word from Selective Service headquarters gave no cause for cheer as to young workers. Draft officials said their 20-years and up pool is about exhausted. They are prepared to order drafting of 19-year-olds on short notice.

Reserve Specialists

Distribution specialists, from warehousing experts to manufacturers of materials handling equipment, who have served the

government in any capacity since 1950 may expect to be included on one of the master lists which the government is compiling. These are being set up on direct orders from the White House which instructed major agencies to do so for the purpose of creating a reserve pool of industrial, business, and professional ability from which specialists could be called upon in an emergency.

Since 1950, tens of thousands of people from industry and the trades have served the government in one capacity or another, largely in the ODM (including DPA, NPA and OES), and the Commerce and Defense Departments. Some have been merely advisers. Others have accepted temporary employment.

These people will make up the basic lists. Agencies will take their names from their records, list them by name, by special ability or knowledge, and try to keep an up-to-date record of where they can be reached.

Machinery Storage

A big warehousing problem lies ahead for the government if it goes through with present plans to make and store a reserve of machine tools. Just how big, no one knows at the moment, for the plan is still in the formative stage.

(Resume Reading on Page 19)

Modern Handling . . .

(Continued from Page 23)

adept at making tight stows with loads of varying dimensions, but prefer each load to represent at least a ton. Among the smallest is a pallet used for tinplate; among the largest, one for sheet stock 100 in. long.

For its own general needs, the company finds that a 66 by 46 in. pallet is most practical. This permits a load of at least one ton of most package freight offered for shipment, and is especially adaptable for bagged material such as flour and sugar.

Previously difficult-to-unitize items are falling into line. Rolled commodities are an example. Such materials as roofing paper and linoleum presented for shipment in rolls were once thought impossible to palletize.

For perfectly square cartons, which do not lend to dovetailing, wooden collars are laid on top corners and tied with a cord. A collapsible (to save space when returning empty) pallet box is used for cartons and boxes too small to make up into a stable pallet load.

Pallet Return

Between most ports served by the company, traffic is usually heavier in one direction than the other. At Montreal, for example, inbound freight predominates. The company takes advantage of this situation to equalize the distribution of pallets. Ships outbound from Montreal carry the excess pallets for return to ports such as Toronto and Hamilton.

Another recent CSL achievement is an 8-hour reduction in the turnaround time of CSL package freighters on run between Point Edward (Sarnia) and the Lakehead (Port Arthur and Fort William). These are points of transshipment in the rail-water freight service between Eastern and Western Canada.

CSL operates the terminals at both ends of this rail-lake-rail service, and can therefore control palletizing of LCL loads. Most of LCL traffic originates at the larger freight stations of the Canadian National Railways in Eastern Canada. At first glance it would appear there is an opportunity here to work out a system of palletized LCL handling at some of these railway stations, in conjunction with CSL. Admittedly, this is something for the future, but the possibility is there with the more general use of mechanical equipment in railway-operated terminals.

Whether such aspirations are realized or not, CSL's present box score is an imposing one. Prior to 1935, a standard unit of 70 cartons involved 17½ hauls and 280 handlings. Today the same unit is moved in one haul and three handlings. •

(Resume Reading on Page 24)

Appliance Movers Like

Escort HAND TRUCKS

The Truck with the
CRAWLER TREAD

CRAWLS on Roller Bearings
up and down steps



Everybody likes this APPLIANCE TRUCK!

The ideal truck for every purpose! No lifting . . . no fatigue . . . carries a full load safely up and down stairs and crawls over obstructions. Your men will appreciate the Escort truck.

Escort CRAWLER
HAND TRUCKS



Ideal For Handling:

- Refrigerators
- Water Heaters
- Gas and Electric Ranges
- Music Machines
- Any appliance



Catalog on request

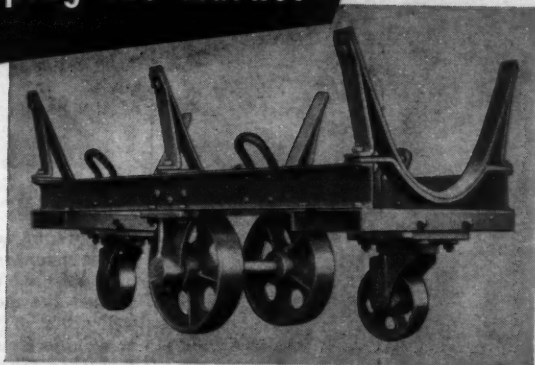
STEVENS APPLIANCE TRUCK CO.

Norton Road

Augusta, Ga.

P. O. Box 897

The Lansing BAR IRON TRUCK is sweeping the market



**Rugged &
Efficient**

for heavy duty handling of bars, pipe and rod.

The Lansing Bar Iron Truck has won tremendous acceptance because it operates efficiently and stands up under extremely heavy service. In large operations it is used to supplement power handling equipment and in smaller plants it solves the bar stock problem. Built-in hoisting eyes permit use with overhead handling systems and a choice of wheels make it suitable for any type of floor.

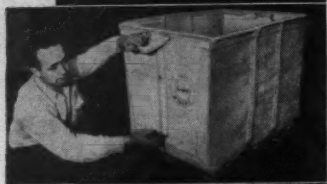
LANSING CO.
LANCO MATERIAL HANDLING EQUIPMENT

ASK YOUR DISTRIBUTOR OR WRITE TODAY
FOR FULL INFORMATION
Home Office & Factory Lansing, Mich.

Circle No. 119 on Card, Page 35, for more information

LANE

**BASKETS
ARE MATERIALLY
BETTER**



Here's Why

● Heavy duck sleeves for holding body to frames

Heavy-duck sleeves for holding body to frames is a feature you'll always find in every Lane basket. Lane deeply embeds short stitches into these heavy weight canvas sleeves and the body to give you maximum wearing strength where it is needed most.

And Lane goes one step further, all sleeve edges are turned under to prevent any possible unraveling.

Investigate Lane baskets, hampers and trucks today and see for yourself why Lane is the standard of quality.

Lane

W. T. LANE & BROS., INC.
Poughkeepsie, New York

TRADE MARK



FINGERTIP CONTROL

Revolver Co.-Getter—telescopic straddle type lift truck—a bear for work in crowded areas, narrow aisles. Fully automatic—extraordinarily maneuverable 200° turning arc—2500 lb. capacity—very slight operator training necessary. Write for full details of this and many other models.

REVOLVATOR CO.

8796 TONNELE AVENUE • NORTH BERGEN, N. J.

Circle 121 on Readers' Service Card

DA Holds Renegotiation . . .

(Continued from Page 31)

While the speaker went into some detail as to the reports that are required, and their method of filling out, he repeatedly emphasized the necessity of preparing a proper report—as only by means of this report can members of the Panel make their decisions. He pointed out that the report should contain information obtained (1) from the accounting department, (2) Research as to sales and end use of the product, (3) Summation of all the factors that entered into the government business, with special reference to the importance that this business played in the National Defense effort.

Research Data

Mr. Smith pointed out the difficulty involved in collecting all the material involved in Step 2—Research—and said that the gradual accumulation of this material is necessary for a good written report as, if this is left to the very last, many important details may be forgotten or unintentionally omitted.

As for the final report, this has been covered in detail not only in this article but in the article which appeared in the September issue. By way of summary it should be remembered that once sales have passed the \$250,000 mark there is no way a company can avoid renegotiation.

If your profits are worth defending, and it is your earnest desire to co-operate fully with the government on the subject of renegotiation, you should submit a report which, in your best opinion, represents the efforts made by your company in the interest of the National Defense Program.

Floor Participation

While Mr. Smith endeavored to cover all the important features in this talk, he acknowledged that many of his listeners had problems which he may not have covered and, as a result, opened the meeting to questions. An indication of the interest shown in this subject may be obtained from the fact that the address itself averaged about 45 minutes, but that the question and answer period which followed required from 1½ to 2 hours to cover before the meeting, of necessity, had to be adjourned. Mr. Smith has kindly agreed to answer questions by readers. They should be directed to this publication, Attention of the Editor.

Not only is the matter of interest, but because some of the questions and answers may be of help to the readers, a number of the questions recurring most frequently have been noted and their answer, as supplied by Mr. Smith, given. The questions follow:

Questions and Answers

Q. "Will billings by a warehouse company made under a master government contract be subject to renegotiation?"

A. Master warehousing contracts all contain a clause providing that billings under this contract are subject to renegotiation.

Q. "If you have sales less than \$250,000, is it necessary to file any form with the Renegotiation Board?"

A. If you have any sales with National Defense end use, you must file Form RB1.

Q. "When is it necessary to file Form RB1?"

A. It is due 90 days after the close of your fiscal period.

Q. "When is it necessary to file Form RB1B?"

A. It has been the policy of the Board to require the filing of RB1B, 60 days after RB1. Under a recent ruling, the 60 day interval has been eliminated. The new ruling is applicable to contractors' fiscal year ending on or after Dec. 31, 1952. Under a special provision, however, regulations state that contractors who must file before April 1, 1953 (those having fiscal years ending before December 31, 1952), should file both forms together whenever possible, but if this cannot be done, they may file Form 1B and request permission to submit Form 1B not later than 60 days after the due date.

Q. "Our company experienced a loss for the fiscal year ending June 30, 1952. Can we carry this loss over as a charge against renegotiable profits for the year ending June 30, 1953?"

A. If the loss is not the result of inefficiency or negligence on the part of the contractor, it may be carried as an item of cost to the following year.

Q. "Our Company is engaged in specialized engineering work requiring..."



"I started this business with nothing but two dozen cardboard boxes—full of money, of course."

DISTRIBUTION AGENTS

ing officers of above the usual ability. Will the salaries they receive, being large in proportion to sales, be disallowed?"

A. If, in Board opinion, the salaries are excessive, they can be disallowed in the amount considered to be excessive by the Board.

Q. "Is it necessary to disclose the various affiliations of our Company?"

A. RBI requires a statement concerning all affiliated companies.

Q. "What importance does the Board attach to price reductions made on a fixed price contract?"

A. The Board attaches considerable weight to a company who has accepted a contract on a firm basis and progressively makes price reductions during the life of the contract. Pricing is a corner stone of renegotiation.

A contractor who is continuously giving the government the benefit of lower material costs, lower production costs through increased manufacturing procedures, and such other technical developments, thereby reducing operation costs is favorably considered by the Board. Most companies neglect to summarize effectively the dollar savings to the government through these price reductions.

Q. "How does the government view income received under royalty agreements?"

A. It is a point in favor of the contractor if he grants royalty free license agreements to those companies engaged in production for the National Defense Effort.

Q. "Is it necessary to spend much time in describing our manufacturing processes?"

A. In arriving at its determination, the Board gives considerable weight to companies who are considered to be integrated manufacturers as vs. assemblers and to those companies involved in technical engineering, electronic and chemical processes, as vs. a simple manufacturing operation.

Q. "How does the Board view executive compensation?"

A. Executive compensation will be considered in the light of time devoted and the work he performs.

Q. "Are commissions paid to independent agents allowable charges against renegotiable business?"

A. If the agents are bonafide representatives of the company and are engaged in soliciting business under a contract agreement, and the amount paid them is reasonable, it will be allowed as an expense against renegotiable business. You must report to the Board all persons receiving commissions of approximately \$10,000 or more a year. Manufacturers' agents are subject to renegotiation if the total gross amount received by them exceeds \$25,000 for their fiscal period.

Popular Misconceptions

Popular Misconceptions

Mr. Smith pointed out that a number of erroneous conceptions of the Act exists in the minds of industry executives. As one case he pointed out that Maintenance and Repair Orders generally are considered exempt. This is true, commented the speaker, only when materials and parts purchased for this purpose are retained by the purchaser. Prime contracts for maintenance and repair parts are subject.

In general, if you sell materials or equipment which process an end product or are part of an end product for the government, then they are subject. The speaker prepared charts listing at length items exempt and not exempt from renegotiation. Portions of these are illustrated in this article. The charts may be obtained for a nominal fee from the speaker. Inquiries should be addressed Attention the Editor.*

(Resume Reading on Page 32)

NOLAN

ONE-MAN CAR DOOR OPENER

Opens
Doors
in
20
Seconds
or less!



The Nolan Car Door Opener gives one man a tremendous amount of pulling energy, to get the most stubborn, hard-rolling door wide open in a hurry!

No gangs needed. No mangled limbs or loss of life. A few quick pulls on anchor chain gets any door open in a jiffy. The NOLAN saves its low initial cost in first hour of operation. New safety and efficiency features now make the Nolan 1-Man Car Door Opener a more necessary labor-saving money-saving help than ever before.



Free Literature Order one or more NOLAN Model-H Car Door Openers now

Many Thousands in constant daily use!

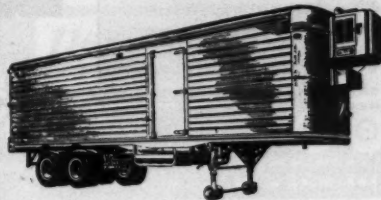
\$29⁵⁰

F.O.B. BOWERSTON

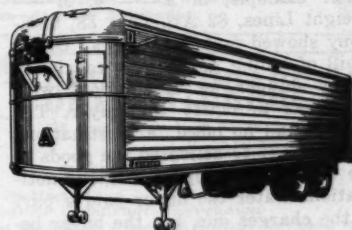
The NOLAN COMPANY
108-C Pennsylvania Street
Bowerston, Ohio

Circle 122 on Readers' Service Card

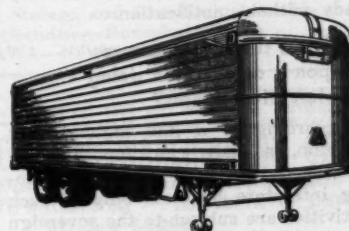
Toughest of EXTRA LIGHT Trailers



DURABLE



DEPENDABLE



with the Dorsey trouble-free Tandem that requires NO LUBRICATION

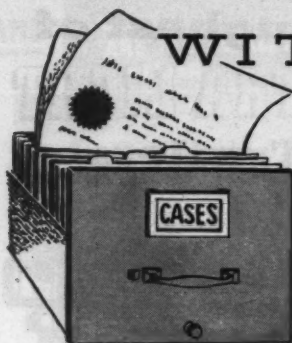
DORSEY TRAILERS

ELBA, ALABAMA

Circle 123 on Readers' Service Card

We Take The Time To Save You Trouble

The Reader Service Card on Page 36 is run for your convenience. Use it to get additional information on articles and services mentioned in this issue of DA.



WITHIN THE LAW

By Leo T. Parker

Legal Consultant, Distribution Age

TRANSPORTATION

According to a late higher court decision, part payment on an account is ratification of full payment. This law is applicable to a carrier which accepts part payment of charges.

For example, in *K— v. M—* Freight Lines, 82 Atl. (2d) 88, testimony showed facts as follows: Under a bill of lading goods were consigned to the shipper "at destination" with directions to notify the buyer. The shipper had no office "at destination" and the carrier delivered the goods to the buyer or consignee without notification. Later the buyer paid a part of the charges due, but the buyer became bankrupt before he paid the balance due.

In subsequent litigation, the higher court held the carrier not liable to the shipper because in accepting the part payment from the carrier the shipper ratified the carrier's delivery made without notification.

Can a state impose taxes upon a corporation doing interstate business?

According to a late higher court decision, a state can impose taxes upon activities of a corporation doing interstate business only if such activities are subject to the sovereign power of the state. Moreover, such taxes can be imposed although their payment may come out of funds derived from the corporation's interstate business, provided that the taxes are so imposed that their burden will be reasonably related to the powers of the state and are nondiscriminatory.

On the other hand, a state cannot levy a tax upon the privilege of carrying on a business that is exclusively interstate in character, no matter how fairly the tax is apportioned to the business done by the corporation within the state.

For example, in *S— Motor Service, Inc. v. O'C—*, 71 S. C. Reporter, 508, the testimony showed facts as follows: A state passed a tax law which levied a business tax on the

franchises of foreign corporations engaged exclusively in the interstate trucking business.

The Supreme Court held the state law invalid although the tax is computed at a nondiscriminatory rate on that part of the corporation's net income which is attributable to its business activities within the state. The court said:

"The tax is not levied as compensation for the use of highways or collected in lieu of an ad valorem property tax. It is not a fee for an inspection or a tax on sales or use. It is a 'tax or excise' placed unequivocally upon the corporation's franchise for the privilege of carrying on exclusively interstate transportation in the State.

It serves no purpose for the State Tax Commissioner to suggest that, if there were some intrastate commerce involved or if an appropriate tax were imposed as compensation for petitioner's use of the highways, the same sum of money as is at issue here might be collected lawfully from petitioner.

Even though the financial burden on interstate commerce might be the same, the question whether a state may validly make interstate commerce pay its way depends first of all upon the constitutional channel through which it attempts to do so."

Is a city ordinance not clearly authorized by a state law valid or not?

A city ordinance not clearly authorized by a state law is invalid. In other words, the right of a municipality to impose a tax stems from delegation of taxing power given the municipality by the State Legislature. Hence, a city ordinance is void, not specifically authorized by a state law, and which imposes a tax on a motor carrier that transports merchandise into a city especially if the carrier maintains no terminal for storage of merchandise in the city.

For example, in *City of Hartselle v. B— Transportation Co.*, 51 So. (2d) 713, the testimony showed facts as

follows: A state statute authorized levy and collection of a privilege tax from persons operating terminal station facilities for the transportation of freight within a city, but the state law contains no reference to levy of tax on motor carriers for the delivery of goods or merchandise within the city limits.

The higher court held that a city without authority to impose a tax on a motor carrier transporting commodities into a city which does not maintain a station or terminal for storage of merchandise therein.

What are valid freight rates on merchandise shipped from Canada to the United States?

Considerable discussion has arisen from time to time over the legal question: "What are valid freight rates on merchandise shipped from Canada to points within the United States?"

In *Commodity*, 190 Fed. (2d) 461, the higher court held that the rate for goods shipped from Canada to the United States must be on a par with freight rates for the shipment of similar merchandise within the United States.

A recent higher court held that where merchandise is shipped under a bill of lading which contains an "order notify" clause, the carrier is obligated to conform with the "sight draft restriction."

For example, in *G— Freight Co.*, 232 Pac. (2d) 786, it was shown that goods shipped under an "order notify" bill of lading were delivered by carrier to a warehouse company without requiring that the sight draft be honored.

The court held that under an "order notify" bill of lading accompanied by a "sight" draft, the carrier is obligated to know that the "sight" draft is honored and must "pick up" the bill of lading. The court said:

"Under the terms of the bill of lading he must see that the sight draft is honored and pick up the bill of lading from the bank."

Can you avoid paying state taxes on goods stored and ordered out by customer?

Some time ago a warehouseman wrote an interesting letter, as follows: "How can a warehouseman, as a customer, avoid paying state taxes on goods stored in the warehouse and ordered out from time to time by customer for shipment to purchasers? What is the legal difference between real and personal taxes?"

Recently the Supreme Court of the United States rendered an important decision which clearly settles the question on the first mentioned question of taxation. This court held that a warehouseman and his customers or contributors can avoid paying taxes on state on strictly interstate business.

(Please Turn to Page 85)

JACKSONVILLE, FLA.

Established 1925

LANEY & DUKE
Storage Warehouse Co., Inc.
657 East Bay St. . . . Phone 5-7851
MERCHANDISE STORAGE—POOL CAR DISTRIBUTION

Represented by
CHICAGO 1
804 E. JOHNSON AVE.
WA 3-2347

NEW YORK 11
11 WEST 43RD ST.
PL 6-0423

**Fireproof
Construction**

**JACKSONVILLE, FLA.**

FLORIDA'S LARGEST WAREHOUSE

Union Terminal Warehouse Company

700 East Union Street, Sta. G

Merchandise Storage—Custom Bonded—Pool Car Dis-
tribution—Reconsigning—Trucking Service—Trackage
52 Cars—Reinforced Concrete—Sprinkler System—
A.D.T. Service—Insurance Rate 12 Cents.
Rental Compartments—Sub-Postoffices.
Members A.W.A.—A.C. of W.—J.W.A.

**MIAMI, FLA.****INTERNATIONAL BONDED WAREHOUSE CORP.**

U. S. CUSTOM BONDED

Member of American Warehousemen's Association
and Southeastern Warehousemen's Association
Negotiable Warehouse Receipts

MERCHANDISE STORAGE

FEC RR SIDING—2 CARS

219-251 S.W. First Court (36) Tel. Miami 2-1208

**MIAMI, FLA.**

FLORIDA'S NEWEST WAREHOUSE

Seaboard Warehouse Terminals, Inc.

3651 N.W. 51 ST., MIAMI, FLA.

- Commercial Storage
- Pool Car Distribution
- Completely Palletized
- Low Insurance Rate
- New Fireproof Building

ST. PETERSBURG, FLA.

Established 1927

Public Bonded Storage Warehouse
3435 - 7th Ave., So. St. Petersburg 1, Fla.
PHONE—7-5523

Merchandise Household Goods
Modern—Sprinklered Buildings—Private Railroad Siding
Local Hauling, Packing & Pool Car Distribution

TAMPA, FLA.

"Your Tampa Branch House—Since 1921"



**CALDWELL
BONDED
WAREHOUSES**
MERCHANDISE—HOUSEHOLD GOODS
Member American Warehousemen's Assn.

ATLANTA, GA.

AMERICAN BONDED WAREHOUSE Affiliated
SOUTHEASTERN BONDED WAREHOUSES, Inc. with
"Better Warehouse Service"

651-663 Humphries St., S.W.—Sou. R. R.

Merchandise Warehousing Pool Car Distribution
Sprinklered A.D.T. Burglar Protection A.W.A.

**SAVANNAH, GA.****SAVANNAH****BONDED WAREHOUSE & TRANSFER CO.**

WEST BAY STREET AT CANAL

Post Office Box 1187

General Storage—Pool Car Distribution
Local Cartage—Custom Bonded—State Bonded
Field Warehousing—Sprinkler System

Members: A.W.A.—A.C. of W.

Navy PM Program . . .

(Continued from Page 43)

his findings to his supervisor. Servicing or repair instructions are issued on the basis of information on the service card and the inspector's report.

After repairs, the vehicle is again inspected before returning to service.

Laboratory Test

Oil samples taken at the Supply Center are logged in at the Mare Island industrial laboratory and tested. In evaluating used lubricating oil from gasoline engines, the Island staff gives a visual examination and tests fuel dilution, flash point, viscosity and centrifuge reaction.

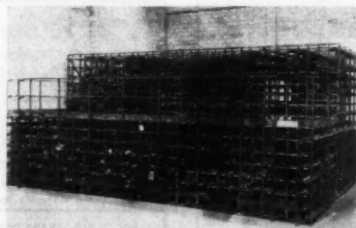
Conclusions are noted and recommendations made upon the basis of results of testings and information supplied by the Supply Center's shop.

The final report contains the vehicle number, date of sample, oil added since last change, viscosity SSU at 100 deg F, approximate SAE number, solids per cent, precipitation number, foreign matter and fuel dilution, flash point, crankcase operating temperature and recommendations.

In addition to maintaining MH equipment used at the Naval Supply

Center, the equipment shop is designated as the West Coast Repair Center. It is responsible for repairing similar equipment for outlying Pacific Ocean bases as well.

An average monthly load of 1,800 pieces passes through the shop for minor and major repairs. And this load has led to the invention by Supply Center employees of many important contributions to the shop itself and to industries engaged in manufacturing the many types of mechanized equipment used in freight handling,



Douglas Aircraft El Segundo, Cal., plant has installed largest bar stock rack ever fabricated of Unistrut metal framing—132 ft wide, over 25 ft deep and 14½ ft high. It is designed to support 4,700 tons

storage, ocean cargo and air transportation and loading.

The Navy's program of liberal allowances and cash awards for suggestions and ideas leading to labor-saving and more efficient operations has paid huge dividends in savings of millions of dollars.

Employee Helps

Among the numerous labor-saving innovations installed in the shop are a holding device for installing steering axles, reinforcing brake drums, adjustable finger hooks for picking up any size industrial batteries and a transmission and differential assembly installer.

Necessity mothered many inventions and led to many other labor-saving suggestions by personnel, such as an equipment trailer, made in the shop, which expedites the placing of needed repair pieces by eliminating to and from trips to supply bins and parts department stocks.

The Naval Supply Center shop has 149 employees, who service and maintain an additional 1067 pieces of engine and storage battery self-propelled weight handling equipment. Other servicing and maintenance duties include a number of equipment trailers, Kentucky and dock trailers and hand non self-propelled materials handling equipment.

(Resume Reading on Page 44)

and Firms are Arranged Alphabetically



LOOK SOUTH

TO SAVANNAH, GEORGIA FOR
WAREHOUSE SPACE

OPEN STORAGE • INDUSTRIAL SITES

More than 2,000,000 square feet in modern, concrete floored, fully protected warehouses for storage or lease. Distribution and all other warehouse services.

UNITS—75,000 square feet and up. Cotton storage and compression.

TRANSPORTATION—All Savannah railroads (ACL, C. of Ga., SAL, S&A, Sou. Ry.), 24 truck lines and good local transportation.

DISTRIBUTION—Complete and in-transit distribution service.

UTILITIES—Power, water, oil, rail sidings, paved streets, sprinkler system, and fire department.

NON-CONGESTED AREA—Temperate climate and dependable workers.



★ Write, Wire or Phone for information

Georgia Ports Authority Warehouses

SAVANNAH, GA.
Henry W. Sweet
General Manager
P.O. Box 1039
Phone 4-8844

ATLANTA, GA.
D. Leon Williams Jack W. Tumlin
Dir. of Commerce Traff. Mgr.
1413 Healey Building
Phone Alpine 1595

NEW YORK, N. Y.
J. C. Vandegriff
Representative
233 Broadway
Phone Rector 2-3772

HONOLULU, HAWAII

WHEN SHIPPING GOODS TO

HONOLULU

Consign to us and the same will be given our best attention. Modern Concrete Warehouses. Collections promptly remitted. Established 1900. Correspondence Solicited

CITY TRANSFER COMPANY, LTD.
610 FORT ST., HONOLULU CABLE ADDRESS: LOVERINO

HONOLULU, HAWAII

LET US
HANDLE
AND
STORE
YOUR



MERCHANDISE - HOUSEHOLD EFFECTS, Etc.

Large, new, reinforced concrete warehouses—Sprinklered Low Insurance — Collections — Distribution Service

HC&D MOVING AND STORAGE

P. O. Box 190, Honolulu 10 Cable address "HONCONTRA"

CHICAGO, ILL.

The Distributors' News Group

Represented by

ALLIED DISTRIBUTION INC
NEW YORK 11 WEST 42ND ST., PENN. 4-0967 CHICAGO 224 SO. MICHIGAN AVE., WA 1-3567



in CHICAGO, ILL. - - - Call H. H. Becker
for Merchandise Storage and Distribution
Information on 88 Member Warehouses

AMERICAN CHAIN OF WAREHOUSES, INC.

52 WEST JACKSON BLVD. • CHICAGO, ILL. • Tel. Harrison 7-3686



CHICAGO, ILL.

THE TRADITIONAL INSIGNIA

ANCHOR
STORAGE CO.
251-315 EAST GRAND AVE.
CHICAGO 11, ILL.



Warehouse located two blocks east of Michigan Avenue. Walking distance from Loop. Ten car switch C&NW Ry. Tunnel service. Splendid building. Low insurance rate.

Represented by
DISTRIBUTION SERVICE, INC.



Member **AMERICAN WAREHOUSEMEN'S ASSOCIATION**

CHICAGO, ILL.

ANDERSON BROS. - STORAGE -

ESTABLISHED
1894

Agents for



3141 N. SHEFFIELD AVE., CHICAGO 14
CHICAGO PHONE-WELLINGTON 5-0014
EVANSTON & NORTH SHORE — ENTERPRISE 4002
2 Warehouse Locations
PACKING, CRATING, SHIPPING TO ALL PORTS—
TO ALL WEST COAST PORTS WEEKLY
Office Removals A Specialty

5

WAREHOUSES IN CHICAGO

GIVE YOU EFFICIENT AND ECONOMICAL COVERAGE OF THE ENTIRE METROPOLITAN SECTION AND ADJACENT TERRITORY

CHECK THESE ADVANTAGES

- | | |
|-----------------------------|---------------------------|
| Modern Buildings | Storage in Transit |
| Choice Locations | Railway Express |
| Low Insurance | Parcel Post |
| Responsible Management | Coal Rooms |
| Spacious Switch Tracks | Fumigation |
| Ample Truck Loading Doors | Space Rentals for Private |
| Waterborne Cargo Facilities | Storage |
| Streamlined Handling | Office Space |
| Equipment | Sample & Display Rooms |
| Local & Long Distance | Negotiable Warehouse |
| Trucking | Receipts |
| Trap Cars Consolidated | Financing |
| Pool Cars Distributed | |

It costs you nothing to investigate Crooks Terminal facilities. Phone, wire or write us regarding your needs. A plan tailored to your requirements will be forthcoming—promptly! No obligation.

★

COMPLETE BRANCH HOUSE FUNCTIONS—including:

- | | |
|---------------------|---------------|
| Receiving | C. O. D. |
| Storing | Sight Drafts |
| Marking | Invoicing |
| Weighing | Collections |
| Reconditioning | Stock Control |
| Shipping | Inventories |
| Freight Prepayments | |



CROOKS TERMINAL WAREHOUSES, Inc.

Chicago 7-433 W. Harrison St. New York Office 16-271 Madison Ave. Kansas City 7-1104 Union Ave. Associated with Overland Terminal Warehouse Co., 1807 E. Olympic Blvd., Los Angeles 21 Members of the American Warehousemen's Association and Interlake Terminals, Inc.

Chuting the News

(Continued from Page 13)

Handling Workshop

A Materials Handling Workshop is scheduled to convene Feb. 6 at the Illinois Institute of Technology, Chicago, Ill. Sponsored by the school and the Chicago Chapter of AMHS, the full-day program is expected to attract more than 150 materials handling people.

Round table discussions will be the order of the day, with technical sessions devoted to three basic topics: General industrial handling, bulk handling and warehousing.

—DA—

Customs Brokers Elect

At a recent meeting of the Executive Committee of the Customs Brokers and Forwarders Association of America, Gilbert M. Colombo, of Behring Shipping Co., was elected treasurer. Anthony V. Biegen was named a director.

Members of the National Council of Private Motor Truck Owners in the Chicago area established the Chicago Private Motor Truck Operators Group at a meeting in November.



Pacific Intermountain Express uses Lewis-Shepherd fork lift for handling "dolly shots" during filming of their new documentary movie, "Wheels of Progress." The film is available without cost for showing to civic and business groups from PIE.

Mollerup Expands

Mollerup Van and Storage Lines, Salt Lake City, Utah, announce opening of a branch in Ogden, Utah. Mollerup has purchased the Davison Transfer and Storage Co., in Ogden.

—DA—

At the recent Annual Meeting of Delta Nu Alpha, C. W. Riscavage was elected vice president of Eastern Region No. 3. The district includes the following chapters: New York, New York University, Omicron, Central Jersey, Rutgers, Lenape and Trenton.

—DA—

Bekins Wins Safety Award

ATA has announced that Bekins Van and Storage Co., California and Arizona Division, has again taken first place in the ATA-sponsored nationwide safety competition, Household Goods Division, 1,000,000 miles and over.

(Resume Reading on Page 15)

DISTRIBUTION AGE

New Orleans

THE ONLY PRIVATELY OWNED AND OPERATED PUBLIC WAREHOUSE AT SHIPSIDE IN NEW ORLEANS

This Corporation, continuing the operations of Douglas Shipline Storage Corporation established in 1931, offers Public, State and U. S. Customs Bonded Warehousing at its new terminal and wharf served by deep-water dock for ocean-going vessels and barges. Louisiana-Southern R. R. switchtrack . . . reciprocal switching . . . sprinklered buildings . . . storage-in-transit privileges.

Represented by DISTRIBUTION SERVICE, INC.

New York, Chicago, San Francisco

Member American Warehousemen's Association

GULF SHIPSIDE STORAGE CORPORATION

Formerly DOUGLAS SHIPSIDE STORAGE CORPORATION
TERMINAL AND WHARF AT FOOT OF ST. MAURICE AVENUE AND MISSISSIPPI RIVER
EXECUTIVE OFFICES: 233 St. Maurice Ave., New Orleans 17, La. - Tel. Vicer 5511-14

NEW ORLEANS, LA.

New Orleans Merchandise Warehousemen's Ass'n

MALONEY TRUCKING & STORAGE, Inc.

133 NORTH FRONT ST., NEW ORLEANS 1

An Able servant to the PORT OF NEW ORLEANS

Complete warehousing facilities—Distribution—Weighing—Forwarding—Fumigating—Storage—Cartage—Field Warehousing—Office Space—Display Rooms—Sprinklered Bldg.

UNITED STATES AND STATE BONDED



NEW ORLEANS, LA.

L. A. Kloor-E. J. Kraft, Owners

STANDARD WAREHOUSE COMPANY

100 Poydras St. - New Orleans 8, La.

MERCHANDISE STORAGE—POOL CAR DISTRIBUTION

Located in the Heart of the Wholesale District • Convenient to Rail & Truck Depots • Private Switch Tracks T & NO-SP RR • Reciprocal Switching
COMPLETE WAREHOUSING SERVICE



SHREVEPORT, LA.

Herrin Transfer and Warehouse Co., Inc.

1305 MARSHALL ST., SHREVEPORT, LA., P. O. BOX 1606

COMPLETE DISTRIBUTION SERVICE

Member

American Warehousemen's Association
Southwestern Warehouse & Transfermen's Association

BANGOR, MAINE

McLAUGHLIN WAREHOUSE CO.

Established 1875

Incorporated 1918

General Storage and Distributing

Rail and Water Connection—Private Siding

Member of A.C.W.—A.W.A.—N.F.W.A.

BALTIMORE, MD.

Complete Warehousing Services



A.W.A.
N.F.W.A.
M.W.A.
N.Y.A.



- Modern, protected facilities
- Commercial & Household Storage
- Packing, Crating & Shipping
- Distribution
- Moving Services
- U. S. Customs Bonded Draymen
- Specialized Expert Packaging

4301 Polaski Hwy.
Broadway 7900
Teletype BA 498

DAVIDSON

TRANSFER & STORAGE CO.



Member AMERICAN WAREHOUSEMEN'S ASSOCIATION

BALTIMORE, MD.

C. M. Wrightson, Mgr. & Treas.

CAMDEN WAREHOUSES

Rm. 301, Camden Sta., Baltimore 1
Operating Terminal Warehouses on Tracks of

The Baltimore & Ohio Railroad Co.

A. D. T. Private Watchman, Sprinkler

Storage—Distribution—Forwarding

Tobacco Inspection and Export—Low Insurance Rates

Consign Via Baltimore & Ohio Railroad

BALTIMORE, MD.

MEMBER: I.M.W.A.—M.F.W.A.—M.W.A.—H.N.C.C.—A.T.A.

J. NORMAN GEIPE VAN LINES, INC.

524-536 W. Lafayette Ave., Baltimore 17, Md.

See our advertisement on page 208—

1952 edition of D and W Directory

BOSTON, MASS.

Owned and Operated by Merchants Warehouse Co.

CHARLES RIVER STORES

131 BEVERLY STREET—BOSTON 14, MASS.



Facilities, 230,000 square feet. Private siding Boston & Maine Railroad. Reciprocal switching, other railroads. Truck platform. U. S. Internal Revenue and Customs Bonded. General merchandise storage. Pool car distribution. Located on Boston's new Arterial Highway. Member A.W.A. and M.W.A.

BOSTON, MASS.

FITZ WAREHOUSE CORPORATION

operating

ALBANY TERMINAL STORES

137 Kneeland Street, Boston 11

GENERAL MERCHANDISE STORAGE

B. & A. R.R. Delivery

BOSTON, MASS.

STORAGE

Wool, Cotton and General Merchandise
INDUSTRIAL SPACE FOR LEASE
IN UNITS TO SUIT TENANTS



LOCATION: Near but outside congested part of city. Obviates costly trucking delays. Overland express call.

STORAGE: For all kinds of raw materials and manufactured goods in low insurance, modern warehouses.

RAILROAD CONNECTIONS: Boston & Maine R. R. sidings connecting all warehouses at Mystic Wharf. New York, New Haven & Hartford sidings at E St.

DISTRIBUTION: Complete service for manufacturers distribution whether from storage or pool cars. Trucking to all points in Metropolitan District.

LEASING: Space in units of 2,000 to 40,000 ft. on one floor for manufacturing or stock rooms at reasonable rentals on short or long term leases.

DEEP WATER PIERS: Excellent piers for cargoes of lumber and merchandise to be landed and stored in connecting warehouses.

WIGGIN TERMINALS, INC.

Boston 29, Mass.

Tel. Charlestown 0880



Member AMERICAN WAREHOUSEMEN'S ASSOCIATION

BOSTON, MASS.**Hoosac Storage & Warehouse Company**
Lechmere Square, East Cambridge 41, Boston
FREE AND BONDED STORAGE

A.D.T. Automatic Fire Alarm
Direct Track Connection B. & M. R. R.
Lechmere Warehouse, East Cambridge, Mass.
Hoosac Stores, Hoosac Docks, Charlestown, Mass.
Warren Bridge Warehouse, Charlestown, Mass.

SPRINGFIELD, MASS.

Member of A.W.A.—M.W.A.

ATLANTIC STATES WAREHOUSE AND COLD STORAGE CORPORATION

385 LIBERTY ST., SPRINGFIELD 1

General Merchandise and Household Goods Storage. Cold Storage for Butter, Eggs, Poultry, Cheese, Meats and Citrus Fruits
B. & A. Sidings, and N. Y., N. H. & H. R. R. and B. & M. R. R.
Daily Trucking Service to suburbs and towns within a radius of fifty miles.

SPRINGFIELD, MASS.


HARTFORD DESPATCH and WAREHOUSE CO. Inc.
214 Birnie Ave., Springfield, Mass.

U. S. Customs Bonded Warehouses—Terminals • Daily Distribution in Conn. and Mass.
Private Sidings • Pool Distribution • Members: AD, Inc.—ACW—AWA

SPRINGFIELD, MASS.**NELSON'S EXPRESS & WAREHOUSE CO., INC.**

Merchandise Storage—Pool Car Distribution
Private siding on N.Y.N.H.&H.R.R.

Bonded Warehouse

Sprinkler System

93 Broad St.
Springfield, Mass.

Telephone
6-8334—6-8335

For Shippers' Convenience, States, Cities

SPRINGFIELD, MASS.

General Cold Storage

Pioneer Valley Refrigerated Warehouse, Inc.

P. O. Box 155

Brightwood Station

Whe.: steel & concrete, automatic fire & burglar alarms—A.D.T. TS Area 1,000,000 cu. ft. Ft. Ld 350 lbs. Cl. Ht 8-10 ft. Elev cap 6,000 lbs. Priv siding 50-car cap on, & consign shipments via B&M; sta. Brightwood; free switching—100% palletized. Temp. range—10° to 40°. Humidity control. 15-16 ft. dock. Specialize in frozen foods. Open yard stge. Br. office facilities. Loans on stored commodities. Printed tariff. Member of the A. W. A. (Cold Storage Div.)

SPRINGFIELD, MASS.**J. J. SULLIVAN THE MOVER, INC.**

Fireproof Storage

Offices: 385 LIBERTY ST., SPRINGFIELD 1

HOUSEHOLD GOODS STORAGE, Packing,
Shipping, Pool Car Distribution of All Kinds
Fleet of Motor Trucks

DETROIT, MICH.

*Facing the Busiest
Thoroughfare in*

DETROIT

200,000 square feet, Centrally located. Private siding facilities for 20 cars with free switching from all railroads. Large, enclosed loading dock. Our own fleet of trucks make prompt reshipment and city deliveries.

JEFFERSON TERMINAL WAREHOUSE

1900 E. Jefferson Ave.

DETROIT 7, MICHIGAN

Men in the News

(Continued from Page 13)

Packages & Packaging

John Martinovich—appointed acting superintendent, United Board & Carton Corp., New York, N. Y.

Joseph S. Miller—chosen chairman of the Eastern Conservation Committee of the Wastepaper Consuming Industries.

Bud E. Simon-ton appointed superintendent of the Toledo factory of the Chase Bag Co. He was formerly associated with the Union Bag Co.

**Transportation—Air**

John Gossman—named district cargo representative for United Air Lines at Cleveland, Ohio.

Robert V. Woodworth has been named general sales manager, The Flying Tiger Line, Burbank, Cal. At 29 he is one of its youngest executives.

**—Highway**

Col. Willard F. Rockwell—awarded a Distinguished Service Citation by the Automobile Old Timers Association. He is chairman of the board, Rockwell Manufacturing Co., Timken-Detroit Axle Co. and Standard Steel Spring Co.

Carroll Roush—president of Roadway Express, Inc., Akron, Ohio, appointed chairman of American Trucking Association's Committee of 100.



Vernon W. Seitz has been promoted to the position of regional sales manager, Branch Motor Express Co., Baltimore, Md. He was former manager of their Baltimore terminal.

Vincent Boody—appointed terminal manager of Wilson Freight Co. terminals at Fairview, N. J., and New York, N. Y.

—Rail

George M. Crowson—assistant to the president of Illinois Central Railroad, elected 1953 chairman of the executive committee of Public Relations Society of America. William G. Werner, manager, division of public relations of Procter & Gamble, Cincinnati, Ohio, was elected president of the group.

Warehousing

Alex MacTaggart — manager of Lackawanna Cold Storage Division of Beatrice Foods Co., Scranton, Pa. has been appointed national sales representative for all the company's warehouses.

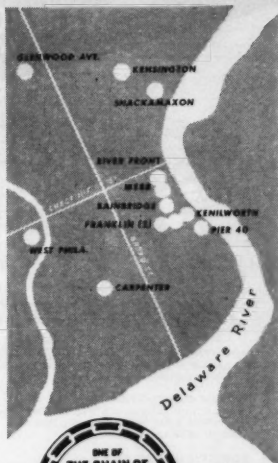
(Resume Reading on page 15)

Traffic

Kenneth H. Jamieson—named assistant general traffic manager at Eastman Kodak Co., Rochester, N. Y. Francis P. Ryan has been appointed assistant to the general traffic manager.

12 Merchants show their wares

Twelve conveniently located Merchants warehouses offer complete, economical, efficient distribution service in the Philadelphia area. They provide safe, swift handling, shipping and storage of packaged commodities of any description. 2,100,000 sq. ft. of warehousing space; sprinklered, modern buildings; direct service by Pennsylvania, Reading, and B&O railroads; sheltered truck platforms; storage-in-transit privileges by rail or water. Send for booklet giving full information.



MERCHANTS WAREHOUSE COMPANY

10 Chestnut St., Phila. 6, Pa.

Tel. LOmbard 3-8070

"PENNSYLVANIA" is your spot in PHILADELPHIA

For efficient, economical distribution in the Philadelphia area, choose from among the 22 big, modern "Pennsylvania" warehouses. Here are over 1,000,000 square feet of desirable free and bonded storage space.

Painstaking personnel, using specialized equipment, handle even difficult commodities with speed and safety. Here are superb rail and highway facilities—one to 10-ton trucks for prompt store-door deliveries. Low insurance rates. Write for full details about money-saving "Pennsylvania" service and storage of goods in any quantities.

Representatives:

Geo. W. Perkins, 82 Beaver St., New York 5; J. W. Terraforte, 250 Park Ave., New York 17; Henry H. Becker, 53 W. Jackson Blvd., Chicago 4.



PENNSYLVANIA

WAREHOUSING & SAFE DEPOSIT COMPANY

303 Chestnut Street • Philadelphia 6

Within The Law . . .

(Continued from Page 62)

transactions. On the other hand, neither a warehouseman nor a distributor or seller may avoid such taxes on intrastate transactions although the seller's principal place of business is in another state.

For example, in *N— Co. v. Department of Revenue, State of Illinois*, 71 S.C. 377, it was shown a Massachusetts corporation had consent of Illinois to do business therein. The corporation operated a branch office and warehouse in Chicago from which the corporation made local sales at retail. Also, the corporation received orders for merchandise in Chicago and forwarded these orders to its Massachusetts office. Further testimony showed that in Massachusetts, the corporation manufactures some 225,000 items, 18,000 of which it usually carries in stock.

In Massachusetts are the general management, accounting and credit offices of the corporation where it accepts or rejects all direct mail orders and orders forwarded by its Chicago office. If an order calls for specially built merchandise, it is studied in Massachusetts and accepted or rejected. Orders are filled by shipment from Worcester, Mass., either directly

to the customer or via the Chicago office.

The Chicago place of business performs several functions. It carries an inventory of about 3,000 most frequently purchased items.



"Er . . . Miss Ash . . . we have other means of materials handling which are at your disposal."

For customers having no established credit; customers who order items not in local stock; customers who want special equipment, the corporation in Chicago office receives their order and forwards it to the home office. In Massachusetts the corporation packages and marks each customer's goods but accumulates them until a carload lot can be consigned to the Chicago office. Chicago breaks the carload and reconsigns the separate orders in their original package to customers.

Supreme Court

The U. S. Supreme Court held that the corporation must pay to the State of Illinois a tax on the income from all sales that utilized the Chicago branch, whether derived from orders received or goods distributed. Also, the court held that the state could tax such income in gross receipts as base for computing and occupation tax imposed by Illinois on persons engaged in business of selling tangible personalty at retail in the state.

On the other hand, the court held that Illinois could not tax the corporation on orders sent directly to Massachusetts by the customers and which were shipped directly from Massachusetts to customers in Illinois, irrespective of whether these were customers of the Chicago branch office.

(Please Turn to Page 91)

PHILADELPHIA, PA.

Established 1883

Gallagher's Warehouses, Inc.

708 South Delaware Avenue, Philadelphia 47.

Merchandise Storage Storage in Transit
Direct Sidings-Penna. R.R. and Reading R.R.
Pool Car Distribution

Represented by Associated Warehouses, Inc.

New York (17) Deliveries Chicago (6)
53 Fenderbilt Ave. City and Suburban 549 W. Randolph St.
W. F. F. 1119-7645 Randolph 6-4457

STORAGE DISTRIBUTION



In Philadelphia

you can solve in jig-time the problems of storage and distribution. You merely get in touch with Terminal Warehouse Co.

Behind this one name are: 13 modern warehouses; 3,000,000 sq. ft. of storage space; U.S. Customs bonded space; efficient storing and moving of household goods; fast handling of bulk or packaged goods; direct connections with the Pennsylvania and Reading Railroads; low switching rates to and from Delaware River piers; pool-car service; storage-in-transit; facilities for receiving shipments by truck; mechanized handling equipment; fast store-door delivery by our own truck fleet. Write for further information.

Represented by **DISTRIBUTION SERVICE, INC.**, an association of good warehouses located at strategic centers.

TERMINAL WAREHOUSE COMPANY

81 Fairmount Ave., Phila. 23, Pa. Market 7-0160

NEW YORK 4: 2 Broadway, Bowling Green 9-0986

SAN FRANCISCO 7: 625 Third St., Sutter 3461

CHICAGO 11: 251 E. Grand Ave., Superior 7180

PITTSBURGH, PA.

ED WERNER TRANSFER & STORAGE COMPANY

1917-19 Brownsville Road
Pittsburgh, Penna.

Storage, Packing and Shipping

Member of National Furniture Warehousemen's Ass'n.

Agent of Allied Van Lines, Inc.

PITTSBURGH, PA.

Thomas White Owner and Manager

2525 Railroad Street, PITTSBURGH 22

**In the Heart of Pittsburgh's
Jobbing District**

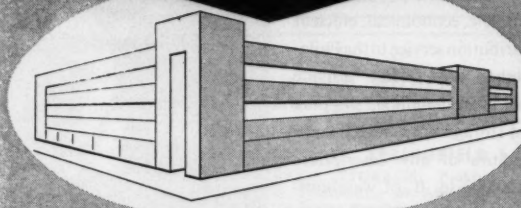
STORAGE IN TRANSIT - B. & O. SIDING
COMPLETE TRUCKING FACILITIES
A.D.T. PROTECTION

WHITE Terminal Company
2525 Railroad Street

Also Operators of
WHITE MOTOR EXPRESS CO.
Established 1918

For Shippers' Convenience, States, Cities

THE ANSWER TO YOUR NEED FOR STREAMLINED WAREHOUSING



CHECK THESE ADVANTAGES:

- ✓ **LOCATION**
Downtown at the Golden Triangle, the hub of Pittsburgh's merchandising district.
- ✓ **NO RISK CONSTRUCTION**
Modern brick, concrete and steel buildings. Ten million cubic feet of safe, dry, heated storage, office and showroom space.
- ✓ **LOWEST INSURANCE RATE**
100% A.D.T. dry sprinkler system.
- ✓ **PROTECTION SERVICE**
Helm's Electric Protective Service.
- ✓ **EXPERIENCED ORGANIZATION**
Bonded personnel.
- ✓ **STREAMLINED HANDLING**
Electric hydraulic fork trucks, palletization, electric pallet movers, and 10-ton capacity self-leveling and self-opening hydraulic high speed freight elevators.
- ✓ **LOADING, UNLOADING FACILITIES**
52 off-the-street, canopy type truck walls protect shipments in and out of the terminal.
- ✓ **TRANSPORTATION**
Private double rail siding off main line of the Penna. R.R., accommodating 52 cars.
- ✓ **TRUCKING**
35 connecting lines pick up and deliver daily.
- ✓ **STORAGE-IN-TRANSIT**

PITT-PENN TERMINAL CO.

1320 PENN AVENUE • PITTSBURGH 22, PA.

COURT 1-4000

SCRANTON, PA.

R. F. POST DRAYMAN AND POST STORAGE, INC.

LOCAL & LONG DISTANCE MOVING
MANUFACTURERS' DISTRIBUTORS
HEAVY HAULING & RIGGING
HOUSEHOLD GOODS STORAGE
PACKING, CRATING, SHIPPING

SCRANTON, PA.

THE QUACKENBUSH WAREHOUSE CO.

100 W. POPLAR STREET, SCRANTON 3
COMPLETE WAREHOUSING AND POOL CAR
DISTRIBUTION

D. L. & W. and N. Y. O. & W. Sidings

Represented by

CHICAGO 4 884 E. MORGAN AVE. ALLIED DISTRIBUTION INC.
WA 1-2137

NEW YORK 11 11 WEST 43RD ST.
PL 6-9457

WILLIAMSPORT, PA.

Established 1921 Dial 2-4791 Collect for Quotation

WILLIAMSPORT STORAGE CO., INC.

OFFICES
460 Market St.
The Williamsport Bldg.
Williamsport 10, Pa.

The Hub of the Greatest U. S.
Market Within a 200 Mile Radius
30% of the U. S. Population.

MEMBER



WAREHOUSES
• Williamsport
• So. Williamsport
• P.R.R. Sidings
• Storage in Transit
• Warehousing—Distribution

PROVIDENCE, R. I.

LANG STORAGE & TRANSFER, Inc.

139 Charles St. Providence, R. I.

General Merchandise Storage and Pool Car Distribution
Intrastate and Interstate Common Carrier
70,000 sq. ft. of modern fireproof
warehouse space serviced with up-to-date truck
and materials handling equipment
Complete ADT burglar and fire alarm protection

and Firms are Arranged Alphabetically

MILWAUKEE, WIS.

Those who know, say "STORE AMERICAN" because
PERSONALIZED ON-THE-SPOT WAREHOUSE SERVICE ASSURES
FRIENDLY CUSTOMER CONTACTS & GOOD PUBLIC RELATIONS!
Select your Warehouseman as you would your Representative
CHOOSE

AMERICAN WAREHOUSE CO.

General Office: 525 East Chicago St.
Private Siding—Chicago & North Western Ry.
Milw. Whse. Ass'n
Wis. Whse. Ass'n
House No. 2
302 North Jackson St.
3rd Ward District

Service that Milwaukee likes

ATLAS STORAGE MILWAUKEE

Complete warehousing and distribution service tailored to meet Milwaukee's needs.

ATLAS STORAGE
Division of P. & V.
Atlas Industrial Center, Inc.
647 W. Virginia Street Milwaukee 4, Wis.
Telephone Broadway 1-7282

WISCONSIN

HANSEN STORAGE CO. MILWAUKEE

124 N. JEFFERSON ST.

LARGEST AND MOST MODERN

MILWAUKEE, WIS.



LINCOLN WAREHOUSE COMPANY

MERCHANDISE WAREHOUSING AND DISTRIBUTION

LOCATED IN HEART OF BUSINESS DISTRICT

Offices: 206 W. Highland Ave., Milwaukee 3
Member of A.W.A.—W.W.A.—M.W.A.

National Warehouse Corp.

MILWAUKEE'S FINEST



A SOLID BLOCK OF RESPONSIBLE WAREHOUSING

ALSO LEASE RENTALS OF WHOLE BLDGS. OR PARTS
SO. WATER & E. BRUCE STREETS

MILWAUKEE, WIS.

—Phone Marquette 8-7091

TERMINAL STORAGE CO.

100-112 W. Seeboth St.
Milwaukee 4, Wisconsin
Cooler, Freezer and General Merchandising Storage
Deep Water Dock, Private Siding
on C.M.St.P. & P. R.R.

SHAWANO, WIS.

Modern Building, Reinforced Concrete Construction

SHAWANO TERMINAL WAREHOUSE

120 E. Richmond Street Shawano, Wisconsin

General Merchandise Storage

LOW INSURANCE RATES

POOL CAR DISTRIBUTION

Licensed and Bonded. Private Siding Chicago & Northwestern R.R.

Member Wis. W. A.

CANADA

MONTREAL, QUE.



St. Lawrence Warehouse Inc.

8-VAN HORN AVENUE, MONTREAL, CANADA
200,000 SQ. FT. OF MODERN FIREPROOF SPACE LOCATED
IN THE EXACT CENTER OF THE CITY OF MONTREAL
Canadian Customs Bonded. Private Siding — 8 Car
Capacity—Free Switching—All Railroad Connections
Represented by

ALLIED DISTRIBUTION, INC.
CHICAGO, ILL. NEW YORK, N. Y.

Within The Law . . .

(Continued from Page 85)

Can I be held personally liable for contracts which I make for an employer?

A reader who is an executive asked this question: "Assume that my home is fully paid for, and I am employed on a salary basis. Can I be held liable on contracts which I make for my employer, and is my home subject to any such liability?"

The answer is: Yes, your home is subject to execution and sale to satisfy a court's judgment against you for certain contracts made for your employer.

For example, the higher courts hold that an employee who makes a contract in his own name, without disclosing the identity of his employer, renders himself personally liable unless the testimony proves that the mutual intention of the parties was

that the employee should not be personally obligated on the contract.

For further example, in *A. A. E—Co., Inc., v. B—*, 193 S. W. (2d) 631, the testimony showed facts as follows: Mr. W— was an employee of a corporation. He purchased a considerable quantity of equipment and merchandise for the corporation which the seller charged personally to W—.

In subsequent litigation W— contended that he was not personally obligated to pay for the merchandise because it was utilized by the corporation.

(Please Turn Page)

Circle 124 on Readers' Service Card



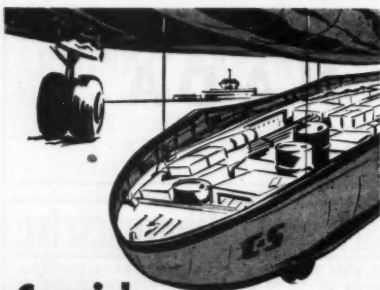
as the
pilot plots
each flight
in advance

United VAN LINES

AGENTS *Pre-Plan*

EVERY MOVE

Your nearby United mover
is listed in the Classified
Phone Book . . . or write
United Van Lines Inc.,
St. Louis 17, Missouri.



Connie's 8000 lb. Papoose

Detachable cargo Speedpaks, handling 8000 lbs. in freight up to 25 ft. in length, ride with C&S' 300 mph Constellations and provide through service from Chicago and the Midwest to New Orleans and Caribbean points.

Venezuela,
Jamaica,
Cuba

Call nearest
C&S Office or
Cargo Sales
Manager
Memphis, Tenn.



Circle 125 on Readers' Service Card

INDEX TO GENERAL ADVERTISERS

A
American District Telegraph Co. 57
Automatic Transportation Co.
Third Cover

B
Baker-Raulang Company 1
Branch Motor Express Co..... 10

C
Chicago & Southern Airlines... 92
Clark Equipment Co. Industrial
Truck Div. 5
Consolidated Freightways 57

D
Darnell Corporation, Ltd..... 56
Delta Air Lines..... 6
Dodge Div., Chrysler Corp..... 14
Dorsey Trailers, Inc..... 61

E
Eaton Manufacturing Co..... 17
Equipment Manufacturing, Inc.. 58

F
Freuhauf Trailer Co.. 2 & Back Cover

L
Lane & Bros. Inc., W. T..... 60
Lansing Company..... 59
Lewis-Shepard Products, Inc.... 9

M
Magnesium Co. of America.... 8
Mercury Manufacturing Co.
Second Cover

N
Nolan Company, The..... 61

P
Port of Los Angeles..... 54

R
Revolator Company 60

S
Stevens Appliance Truck Co.... 59

T
Towmotor Corporation 55
Trans World Airlines..... 4

U
Union Pacific Railroad..... 16
United Van Lines, Inc..... 92

Y
Yale & Towne Manufacturing Co. 18

Within the Law

(Continued from Page 91)

The higher court held W— personally liable to pay for all of the purchased merchandise.

Modern higher courts consistently hold that all employees are personally liable on contracts (1) where the employe makes a false statement or representation of his authority, with intent to deceive the other party to the contract; (2) where he knowingly makes a false statement or representation, without intention to deceive; (3) where he does a damaging act believing he has authority, but actually has none; (4) or where he acts on authority from his superior and does an unlawful act. (See T— v. B—, 78 S. E. (2d) 126).

In order to avoid personal liability on contracts made for an employer, the employe must be certain to avoid violating this rule.

A few days ago a reader wrote an interesting letter, as follows: "Recently our corporation sold certain equipment on the installment basis. The equipment did not equal the guarantee we gave the purchaser who has filed suit. He claims that we owe him damages which amount to more than the balance he owes on the contract price. What are our legal rights?"

The answer to this question is: When a seller breaches a guarantee to a purchaser the latter may keep the goods and "set up" against the seller the diminution or extinction of the price, or the purchaser may return the goods to the seller and recover all moneys paid, plus full damages which resulted from the seller's breach.

See P— v. M—, 218 N. Y. 505. In this case it was shown a seller sued a purchaser to recover possession of equipment which the purchaser had purchased under a conditional sale contract which provided for a down payment and the balance in monthly installments. Since the seller had breached his contract the court held that the purchaser could keep the equipment and "set up" against the seller the diminution of the contract price. In other words, the purchaser would owe the seller nothing if the amount of damages suffered by the purchaser equaled or was more than the balance due on the purchase price.

Also, see W. H. B— Co. v. M—, 154 P. (2d) 513. Here a seller sued to recover the possession of merchandise sold to a purchaser on a conditional sales contract. The purchaser proved that he was damaged by the seller's breach of a guarantee on the machine. This court held that the purchaser was entitled to retain possession of the merchandise until the seller repaid the down payment and also paid the court's judgment of \$354.05 for damages.